Representatives of the Kananjia, Maithila, Gour and Sokaduipi divisions of Brāhmans are met with, and numerous subdivisions within these main divisions are found.

The Maithila Brāhmans are the most numerous and they still keep up their unique family records for the purpose of arranging marriages. They still merit the terse description attached to them by Rama Chandra when they refused to help him.* The keepers of the records are known as *panjiars* and they act along with *ghataks* or marriage-brokers. In this district, the annual meetings for arranging the marriages are held at Bangaon and Barari The office of *panjiar* is now hereditary, but the permission of the Māharājā of Darbhanga must be taken before a *panjiar* can begin the exercise of his functions.

The main object aimed at by the maintenance of these genealogical records is the prevention of any marriage within the prohibited degrees of relationship. The institution of the system is attributed to Rājā Hara Singh Deva, one of whose ministers is said to have, through ignorance, married a lady within the prohibited degrees.

The traditional occupation of the Telis caste is oil-pressing and oil-selling, but, in addition, many of them have now acquired lands and follow agricultural pursuits. Telis. 72,180.

Kewats are traditionally boating and fishing castes, and are mostly found in the north of the district Large numbers of them have abandoned their traditional occupation and have taken to agriculture. These are known as *grihastas* and are considered to hold higher social rank than the others. Kewats. 57,620.

It is hard to find any survivals of a genuine autonomous village community anywhere in Bhāgalpur. Most of the village officials named below are indistinguishable now from mere servants of the *zamindār* or other landlord. The village community and officials.

The *gomasta* is the landlord's chief agent and is responsible for rent collection, assessment of new holdings, resettlement of abandoned holdings and generally is supposed to watch the interests of his master in the local area committed to his charge. The *tahsildar* is a superior *gomasta*, with several villages under him. GOMASTA. TAHSILDAR.

The *patwari* was in theory a Government official appointed under Regulation XIII of 1817, to keep the village accounts. In fact, he is the landlord's servant, appointed by him at will. The history of the village *patwari* and of the various attempts PATWARI.

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* *Grihe sura rahne bhitah, paraspara virodhinah: Kula bhimanini yugam maithilyam bhavishyatha.*

i. e., "Heroes at home; cowards in the battle-field; ever quarrelling among yourselves and inordinately full of family pride shall you be in Maithila."

and suggestions made to rehabilitate him must be sought for elsewhere. Prior to the recent operations for the preparation of a record-of-rights under Chapter X of the Bengal Tenancy Act, both landlord and tenant were practically at the mercy of the *patwari* whenever rent cases came into court. In some places the *patwari* collects rents in addition to keeping the accounts. In addition to small fixed pay, he gets perquisities from all the servants. He also occasionally holds lands on favourable terms and not infrequently gets entire holdings into his hands and enjoys the fruits thereof while showing them as "unoccupied" or "abandoned" in the accounts.

Barahil Gorait.

The *barahil* and *gorait* are virtually peons who call the raiyats together, and attend on the *gomasta* or *tahsildaar*.

Sonthal villages.

In the southern villages inhabited by Sonthāls, their own system of internal government by their own village headmen or *manjhis* is kept up.

Economic conditions.

The people of this district depend almost entirely on agriculture for their livelihood, and their prosperity or otherwise depends directly on the amount of the annual rainfall, and on its proper distribution In Chapter VI full details of recent years of scarcity are given In such years, the landless labourer is the first to suffer. But as now-a-days, the increased facilities for temporary emigration afforded by the improvement of communications tend to break down the old disinclination of the Indian peasant for quitting his native place, whatever may have been the pressure of want, the classes that first feel the pinch of want evince a spirit of enterprise that impels them to leave their homes in search of work. Thus in the late scarcity in 1907-08 there was a marked movement from the affected areas to those in which there were good crops to be harvested or other sources of employment to be found.

It is difficult to indicate precisely the exact extent to which the economic condition of any people improves, when the periods selected for comparison are not separated by a wide interval of time. Still, the following indications are worthy of consideration as they tend to show that there has been an increase in the demand for petty comforts and luxuries.

The increase in the prices of agricultural produce has given to the peasants more money to spend. This increase has not reacted unfavourably on the landless labourers, as they are usually paid in kind: moreover, there has been an all-round rise in wages which would more than counterbalance a rise in the price of food-grains, had the casual labourer to purchase his food-supplies. This increased prosperity is indicated in the increased revenue derived from the sale of exciseable articles. The casual labourer is a drinker in this district, and having more money to spend, he indulges his taste for liquor.

Again, trade, both export and import, has been brisk of late years The demand for imported luxuries, such as umbrellas, shoes, cigarettes, soap, piece-goods, and various articles of domestic use has increased.

Habits of thrift appear to be growing among the people. The figures for deposits in the post office savings banks have gone on steadily increasing for ten years past. In Chapter VII a note is given about the present state of the movement for the establishment of co-operative credit societies in this district. It is at present only in its infancy, but it has a good field for its future development in this district. In that same chapter will be found some further remarks on the material condition of the people.

Houses. The ordinary dwelling house is a poor erection of mud walls with a thatched roof. Bamboos and thatching grass make the roof, straw being too valuable as fodder for cattle to be used for thatch. In some places tiled roofs are found. In April and May when the hot west winds set in, fires that burn out a whole village are not infrequent. The few brass utensils needed for cooking and eating from constitute the only articles of any value in the house. A hand-mill or a pestle and mortar (*okri*) for husking rice completes the necessary equipment. There may or may not be found as well a *charpai* (string bedstead with bamboo frame) and a couple of heavy boxes with coarsely made native locks on them.

Dress. A loin cloth and head cloth for the men are all that is necessary. The women generally wear a bodice and a *sari* The men may also wear a cotton *chadar* on their shoulders.

Food. Usually the coarsest and cheapest grains are used for food. *Bhadoi* or autumn rice is looked on as the crop that should furnish sustenance for the cultivator and his family for the year. The *aghani* or winter rice crop is generally sold to pay rent, pay a little to the *mahajan* (or repay in kind a loan of seed grain with very heavy interest) and purchase oil, salt, sugar, clothes and other things which the cultivator must buy.

Barley flour is largely eaten where this crop is grown as a *rabi* or spring crop. Maize and marua are grown as *bhadoi* crops and are much used as food-crops. Vegetables of various sorts are grown for home consumption, sweet potatoes being perhaps the most popular on account of the good yield.

Where *mahua* trees abound, its flowers enter very largely into the dietary of the people around In famine years it becomes invaluable as it appears to thrive when nothing else will grow. Among fruits, the mango, jack, guava, and plantain are in great demand.

Where fish can be had, they are very popular as articles of diet. Turtles, land-crabs and water-crabs are also eaten Near Sonthal villages, it is difficult now-a-days to find any sort of game, or living thing. Even the birds are nearly all killed off by the youngsters in the village who bring them down with blunt-headed arrows, displaying considerable accuracy in the use of their bows and these rather clumsy-looking projectiles.

Political and social institutions.

The existing social institutions seem all to be exotic and not of indigenous origin. The chief political association is the Bhāgalpur Landholders' Association. This is not a large body, but it exercises considerable activity. It is consulted at times by Government. It offers opinions on administrative measures and has earned unenviable notoriety by its frenzied opposition to the extension of Survey and Settlement proceedings under Chapter X of the Bengal Tenancy Act to the Bhāgalpur Division. In 1892, this body, with some kindred organizations, presented a memorial against these proceedings to the Governor-General in Council. In Sir Antony (now Lord) McDonnell's minute of September 20th, 1893, published in the Supplement to the *Calcutta Gazette* of 25th October 1893, the position taken up by the memorialists was demolished. In describing the benefits that the preparation of a record-of-rights would bring to both landlords and tenants he stated that they would—

. . . "tend to prevent disputes, facilitate the decision of disputes when they arise in the courts and secure the enjoyment to ten millions of people of their legitimate rights. These rights have been withheld for a century and the memorialists must excuse me if I do not take their word for it that the raiyats are now animated by a violent desire to forego these rights still longer."

It took nearly twelve years for these operations to reach Bhāgalpur district, the districts of Saran, Champaran, Muzaffarpur, Darbhanga and North Monghyr having been first dealt with. In 1904, this Association approached the Lieutenant-Governor, Sir Andrew Fraser, with another memorial traversing the methods of the Settlement Department in general and in particular its interpretation of section 29 of the Bengal Tenancy Act. However, an authoritative ruling * of the High Court proved the memorialists wrong and the Settlement Department absolutely right.

In Chapter VII some details about the relations between landlords and tenants will be found, which show that the

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* *Bipin Bihari Mandal* v. *Krishnadan Ghose*, 32 Calcutta, 295.

Bhâgalpur landlords are not all above criticism in their dealings with their tenants.

There is a branch of the *Indian National Congress* at Bhâgalpur. Its outward activities were formerly confined to the election of delegates to the annual general meeting of the Congress, but of late it has become a centre for seditious agitation.

Social institutions.

A few sectarian institutions exist with the object of ameliorating the condition of the particular section of the community that they represent. So far their influence has not extended very widely nor have their activities been other than very circumscribed. The *Kayastha Sabha, Anjuman Gurba* and *Bhumihar Babhan Sabha* are the most important of these societies.

The Marwari community keeps up the *Gaurakshini Sabha* which shelters and feeds infirm cattle. The anti-cow-killing riots in 1893-94 are thought to have been the outcome of the activities of the emissaries of kindred *sabhas*.

The Bhâgalpur Institute possesses a library. Its subscribers indulge in billiard-playing, newspaper-reading and seditious agitation. In 1908 its finances were in a distinctly unsatisfactory state. The *Banga Sanmilani Sabha* aims at having the so-called "partition" of Bengal modified. The Marwari Young Men's Association is said to be a collection of Extremists, and disciples of Tilak.

The Bihari Literary Society and the *Sahitya Parishad* are non-political associations that aim at literary and social improvement.

CHAPTER IV.

PUBLIC HEALTH.*

CLIMATE AND VITALITY.

AT the end of Chapter I above meteorological observations are alluded to. On the whole this district is healthy. Its mean annual death-rate is 35·79 per mille, that for the whole province being 35·41 per mille for the quinquennial period ending with 1908.

The healthiest months are February, March and July—the average death-rate in these months not exceeding 2 per mille.

In April, May, June, August and September the average death-rate is about 2 25 per mille. In October, December and January it is about 2·5 and in November—the least healthy month—it is as high as 3·23 per mille.

The highest death-rate recorded is 41 3 per mille in 1894. That for 1908 was only 33·22 per mille.

The increased mortality noticed towards the close of the year is correctly attributed to malarial fevers. Of course the term "fever" in the mortality returns covers very many diseases other than malarial fevers, characterized by febrile symptoms. The village chaukidār is not an expert in diagnosis and beyond small-pox, cholera and plague his opinion as to the cause of the deaths reported by him at the police stations does not deserve much consideration.

The least healthy part of the district is the area in the northern half that is exposed to the action of the Kosi floods. Kishanganj thāna suffers more than any other tract. Thana Bihpur comes next in point of unhealthiness.

In the south of the district, an acute type of fever prevails in the area bordering on the Rajmāhal hills in the autumn. In 1872 an outbreak of "dengue" fever occurred. It has not since reappeared. In Hunter's "Statistical Account" a full description of it is given.

Exhaustive statistical researches have failed to establish any clear connection between the birth-rate, mortality-rate and climatic conditions of different years.

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* I am indebted to Captain Barnardo, I.M.S., Civil Surgeon of Bhāgalpur, for the revision of this Chapter.

The death-rate is practically dependent on the fever-rate, though cholera in bad years may cause an increase of from 2 to 5 in the number of deaths per mille. Generally speaking the unhealthiest years appear to be those in which the rainfall is deficient, though in 1894—a conspicuously unhealthy year—it was practically normal. In 1890 and 1891 the death-rate was identical. In the former year the rainfall was 12 inches in excess; in the latter 5 inches in defect. The fever-rate was actually less in the more rainy year and the larger number of deaths from cholera in that year brought it up to 1891 in point of mortality. In 1908 the rainfall was extremely low and the death-rate was well below the mean for the whole province, 33·22 as against 35 41 per mille.

The average is kept up by cholera when rainfall is deficient and by fever (malarial) when raintall is in excess.

The highest birth-rate occurs in 1897—a famine year—which followed on a very unhealthy year. The birth-rate in general maintains a fair average for the district though it varies from 19·20 in Bhāgalpur town to 50 55 in Bihpur thāna. The birth-rate in 1908 was 36 38, the quinquennial average up to that year being 38·29.

An examination of the number of deaths at each age appears to yield fairly definite results. It can be stated with absolute certainty that the greatest mortality in every year occurs in children under one year, next (though in a much less degree) in children from 1 to 5 years. In children from 5 to 10 years and youths from 10 to 20 years the mortality is about the same.

The mortality from 20 to 30 years increases; it falls slightly from 30 to 40 years and still more from 40 to 50 and 50 to 60 years, after which it increases a little. Briefly the first year of life is the most dangerous and this danger continues, though it gradually lessens, up to the age of ten years.

The next decade is the least dangerous. Then there is an increase in danger up to the age of forty years after which there is a progressive fall, decade by decade. At every age, more males die than females, the present annual means being 39·41 males and 32·61 females per mille.

Principal diseases.

"Fever" accounts for about 80 per cent. of the reported deaths, but it is a very comprehensive term in the mouths of the agency on which reliance has to be placed for the collection of vital statistics. Cholera occurs in localised epidemics, the virulence of which varies greatly, almost every year from April to June and from August to October. The mortality from cholera was very high in 1882 (7,719 deaths): in 1890 (10,190 deaths): in 1894 (7,594 deaths): in 1900 15,583 deaths from cholera were reported, and in 1903, 8,558 deaths. Other bowel-complaints such as dysentery and diarrhœa are very common and severe and the mortality figures for epidemics of cholera are enormously increased by the inclusion of many cases of dysentery and diarrhœa.

Cholera in Bhâgalpur town is usually prevalent from April to June, when the water-supply, never very satisfactory, begins to fail. The wells in the poorer *mahallas* are then called into use and their unsatisfactory condition leads to trouble.

Cholera prevails in the district from July to the end of the year chiefly commencing with the ingestion of the products of the *makai* crop, indifferently cooked, among the very poor whose systems have been more or less debilitated by systematic underfeeding.

Small-pox in 1908 accounted for only 15 deaths per mille No attempts at segregation of infected persons can be made.

Small-pox has ceased to be endemic. Inoculation has given place to vaccination, and the degree of protection (255 per mille), which is already fairly high, increases year by year with the dying out of the old people who are unprotected. In the period 1901—1908 the average death-rate from small-pox was less than 1 per 10,000 of population. Most cases occur in the hot weather.

Prevalent fevers.

The following account of the prevalent types of fevers has been adapted from a note contributed by Captain Woolley, I.M.S., Superintendent of the Central Jail at Bhâgalpur:—

Malarial fever.

"This is the most prevalent kind of fever met with in this district, and in one or other of its forms is extremely common among both natives and Europeans. The former, owing to their primitive habits of living, and disregard of ordinary sanitary precautions, are more prone to the disease, living as they invariably do in villages, in which their houses are closely crowded together, with tanks and stagnant pools in close proximity. Malaria is much more common in some parts of the district than in others; people living in the eastern portions in the direction of Rajmáhal suffering considerably during the autumnal months when malaria is at its height. The inhabitants of the jungly areas also, north of the Ganges extending to the Nepal Terai, suffer greatly from fever during August, September and November. The inundation of the Kosi river near Pertapgunj with the consequent raising of the sub-soil water level in thanas Madhupur and Kissenganj leads to very virulent and persistent malarial epidemics which at times practically prostrate the whole neighbourhood. The town of Bhâgalpur itself is not very malarious, standing for the most part as it does on elevated ground. The western end of the town is rather lowlying, and during the rains large areas are flooded. When the river begins to fall, these localities are malarious, as is the case in other similar places.

Malaria as seen here may be classified into—

(*i*) Simple tertian ;
(*ii*) Double tertian ;
(*iii*) Malignant tertian.

The two former are what is known as ordinary fever. In themselves they are not very serious, but repeated attacks, extending over lengthy periods, in persons living always in malarious localities, in badly constructed houses, etc., cause debility, lessen the vitality, predispose to attacks of the malignant form (iii) and may thus indirectly end fatally. The typical temperature chart of (i) Simple tertian is seldom seen: what is generally shown is a short fever with an irregular curve lasting two or three days and which after this may resemble a simple or double tertian. The reason the typical charts of these two simple forms of fever are not seen is that the universal practice of taking *quinine* interferes with the cycle of changes in the parasite in the blood,—the result being an irregular temperature for a few days; the temperature may become normal for some days, and rise again, and this may continue for a long time in cases of feeble health, or in persons whose system is full of the disease. Both these simple forms of the disease are controlled by quinine, and provided this drug be given according to Koch's directions, *i.e.*, two large doses of 30 grains for two days with half this amount for the following three days, most of these cases can be cured comparatively easily.

The parasites of malaria are found in the peripheral blood of these cases in the red corpuscles, but if quinine has been given, they tend to disappear and are found more rarely.

Malignant tertian.

This is a much more severe form. The temperature rises and remains sometimes at a high level 104 degrees, never coming down to normal, and remains thus for varying periods,—a week, a fortnight or three weeks, or in some bad cases even longer. The spleen becomes enlarged, and some persons who have had many attacks of this disease have enormous spleens and are much debilitated. Another serious symptom seen in these cases is intestinal derangement. The parasite is not usually seen in the peripheral blood in the red corpuscles, but there is usually much enlargement of certain white corpuscles, which become distended with pigmented bodies, and being very friable are often seen broken up when blood preparations are made for diagnosis.

Another important distinction from simple forms of fever is that quinine, which is so useful for the former, is useless in malignant tertian fever. This form of fever must be regarded as serious; it not unfrequently terminates fatally, especially in persons who have had previous attacks and continue living in marshy places. It is not very common in this district, but typical cases are by no means rare A considerable number of cases of Leishman Donovan infection (Kala-azar) are noted in Bhāgalpur itself. These nearly all end fatally and resist the most modern method of treatment. Enlargement of the spleen with *little or no enlargement of the liver is their characteristic feature* and the disease has been recognized as "Bhāgalpur spleen" for many years

Enteric or typhoid fever.

Among the native inhabitants this is an extremely common disease and one which takes an extremely heavy death toll yearly. Doubtless most of the deaths between the ages of 1 and 5 years attributed to "fever are due to enteric but are not recognised. In the town itself where the eyes of medical practitioners are more keenly open to the recognition of the disease, it is very common During the months of April, May and June 1909 when the water-supply failed the town, the poor classes were visited with cholera while the better classes suffered from a true infection by the enteric bacillus; at one time no fewer than 200 cases were reported by the doctors of the town.

Cerebro-spinal fever.

This is a form of meningitis which has frequently occurred in the Central Jail since 1897. It is a very fatal disease, about 70 per cent of cases terminating fatally. The causation is doubtful. It is a disease of prisons and crowded communities such as barracks, but at least one case has been detected among the free population and possibly it may occur in crowded villages in the district, without being given its correct name. The specific organism is the diplo-coccus meningitides, which has been found in recent cases in the Central Jail.

A tendency towards this disease has been noticed especially among those convicts, whose labour necessitates their working in a dusty atmosphere.

Isolated cases at intervals of a few years have occurred at the Police Training School at Nathnagar.

Plague.

The history of plague in this district has many features in common with its history in other districts of Behar. It first appeared in the early part of 1900, and the mortality from it in that year was four only. It followed what is now known to be its usual course—gradually subsiding as the hot weather approaches, dying out altogether during the rains and reappearing, oftentimes with renewed virulence, in the ensuing cold season. At first, evacuation of houses, segregation and disinfection were tried. There was the same opposition experienced here as elsewhere to all remedial measures, resistance, sometimes active and sometimes passive, being offered by those whose fatalism rendered them indifferent to the risks of infection and the possible results of an attack of the disease.

The mortality, year by year, from this disease has been as follows:—

Year.	Deaths.
1900	4
1901	50
1902	4
1903	265
1904	1,518
1905	2,369
1906	243
1907	37
1908	816
1909	131
Total	5,437

Inoculation never made any headway in this district, until the early part of 1907. While the outbreak lasted in that year, 1,558 persons were inoculated with very satisfactory results In 1908, 2,200 persons were inoculated with equally good results. It is noteworthy that not a single domiciled Bengali consented to be inoculated. On the contrary, the Bengalis opposed inoculation, not because they doubted its efficacy, but because it was "official" and therefore anathema to them. In the municipal area of Bhāgalpur town, the disease has been most virulent especially in the Marwari quarters where sanitation and cleanliness are non-existent. Voluntary evacuation of houses has become the rule now on the appearance of the disease. Early in 1907 about three-fourths of the houses were deserted.

It is interesting to note that plague has never visited (in epidemic form) any town or villages north of the river in this district with the exception of Narayanpur which had a visitation from pneumonic plague, an infection from an isolated case from Begusarai in 1907. This accounted for 40 deaths in two weeks.

Disinfection by means of crude oil emulsion—which is far more deadly to rat-fleas than the corrosive sublimate and other disinfectants previously employed—was carried out wherever the occupants of houses consented to its being done. A crusade for the extermination of rats was carried on by poison and by offering rewards for all rats and mice brought in alive. In the season ending 31st March 1907, rewards were paid for 134,301 rats destroyed.

It is obvious from what has preceded that plague is responsible for only a nominal number of deaths in comparison with fever and cholera It is noteworthy that the number of inoculations performed against plague has been far higher in this district than in any other district of Bengal. The comparative immunity of Bhāgalpur from plague is a matter of great interest and at present the Plague Commission are at work on the question. The immunity of the district may depend on an immunity of the local rats to plague themselves, and 300 rats have recently been forwarded to Bombay for the purpose of testing their blood in this respect.

It is noteworthy too that Bhāgalpur lies at the apex of a triangular area. The further westward one goes the greater is the plague infection which attains a maximum in the most westward and most densely inhabited district of this province, namely, Saran In this connection it may, too, be noted that mud walls and tiled roofs begin to be in common use just below the apex of the triangle in which Bhāgalpur lies, *i.e.*, at about Sahebgunj.

Other diseases.

The records of admissions to the various hospitals and dispensaries when analysed show that the following diseases occur fairly often in the district:—(1) Primary and secondary syphilis and gonorrhœa. These account for about a thousand admissions per annum. (2) Worms, for which admissions average 2,000 per annum. Badly cooked food and dirty water are the main causes. Tape worm occurs among all classes. (3) Rheumatic affections account for about the same number of admissions per annum. They are rarely acute, generally mild and chronic. (4) Pneumonia and asthma are by no means prevalent. The out-of-door life of the inhabitants protects them, and the strong rays of the sun undoubtedly act as a sterilizing agent on the dust which seems at first sight an excellent medium for conveying this infection. (5) Pulmonary tuberculosis is remarkable on the increase and steps will shortly have to be taken to combat its ravages, otherwise it will assume alarming proportions. It is extremely common in Bhāgalpur town and especially so among the Muhammadan community. (6) Goitre is very common especially in the sub-montane tracts in the north of the district; operative treatment for its reduction is never submitted to. (6) Skin diseases and ulcers are very common; they are due to a low standard of personal cleanliness and septic surroundings. (7) Leprosy is not very prevalent. It occurs both in tubercular and anæsthetic forms. The 1901 census figures show about a thousand lepers in the district. They are most numerous in the Bānkā subdivision. No support to the "fish-eating" theory as a cause of leprosy is forthcoming in this district from the local distribution of those afflicted with this disease. (8) Diseases of the eye are very widely prevalent. Many sufferers from cataractous lens present themselves for operation as the disablement is so complete and the relief so immediate and certain. But at present the modern method of extraction has not earned such popularity as to be able to drive the "coucher" or "rawal" off the field of practice. Thousands of eyes are ruined annually by this unscientific and obsolete method of treatment especially in the northern part of the district. (9) Diseases of the ear are also widespread.

Surgical operations.

The surgical operation most frequently performed is the extraction of the lens for cataract; next is the removal of stone in the bladder by lithotomy or by crushing the stone when possible.

Infirmities.

According to the census of 1901 blindness is the most prevalent infirmity, the number of persons afflicted being 112 males and 96 females per hundred thousand of the population. Its prevalence among the labouring and agricultural classes suggest that the glare and dust to which the generally sandy nature of the soil exposes them, renders them more subject to this affliction.

Deaf-mutism afflicted 127 males and 73 females per hundred thousand of the population in 1901.

Sanitation.

Outside of the municipal areas, sanitation is non-existent. In Bhagalpur, there is a municipal water-supply and the usual system of surface drains. Nightsoil is disposed of in trenching grounds. There is a good natural fall towards the Jamunia and Ganges in some parts of the town. This no doubt helps to explain the fact that the introduction of the water-supply in Bhagalpur has not been attended by the usual rise in mortality—usual, that is, where a complete drainage scheme has not been completed prior to the introduction of the water-supply. Thus, in the five years prior to the introduction of the water-supply, the death-rate of the town was 40·4 per mille. The annual mean death-rate since its introduction (March 1887) has fallen to 31·7. In Chapter XII some further details on this subject will be given. The water scheme has been extremely expensive for the municipality.

The latest amendments to the Local Self-Government Act (1908) provide legal authority for enforcing sanitary measures in rural areas. Time alone will tell how far the objects of these amendments will be fulfilled.

Medical institutions.

In this district there are at present seventeen dispensaries, out of which ten have no accommodation for in-door patients. Over 61 per cent. of the income is derived from private sources, a point in which Bhagalpur sets a very good example to most other districts

Some of those institutions deserve more detailed notice. In Bhagalpur town the Municipal Charitable Dispensary has existed since 1842 It is thus one of the oldest in Bihar. Its popularity has been steadily increasing—the total number of patients treated in 1909 being 913 indoor and 14,476 outdoor. In 1872 the attendance was 267 indoor and 5,039 out door, in 1901 it was 380 indoor and 13,323 outdoor.

In 1868 a new dispensary building was added by the munificence of Babu Sardhari Lal, in 1888 a new surgical ward was erected as a joint memorial to the late Mr. G. N. Barlow, I C.S., (for twelve years Commissioner of this Division) and to the late Major Beatson, I M S., for many years Civil Surgeon of the district.

The lack of funds to keep the building and operation room up to date is regrettable as a recent note of the Inspector-General of Civil Hospitals, Bengal, shows it to be one of the least up-to-date in the province at the time when a large amount of surgical work is done and the popularity of the dispensary is growing by leaps and bounds. A contributing factor to this lack of funds is the famine condition prevailing during the years 1906–1909 and also the fact that many of the chief landholders of the town support in the outlying parts dispensaries of their own.

The local branch of the Lady Dufferin Hospital is known as the "Rani Shibtarini" Hospital. It was founded in 1893 by Rājā Shib Chandra Banerji, and is called after his wife. The attendance is always good. It has been remarked that very few cases fit for operation are brought in. The bulk of the income of this institution is derived from subscriptions from the principal zamīndārs of the district.

The "Victoria Memorial Hospital" has recently been erected for purdahnashin female patients alone at a cost of Rs. 25,000. This is doing good work and is well patronised.

The Mohadinagar dispensary was established in the south of the district by Babu Tilakdhari Lal, the son of the late Babu Sardhari Lal, in memory of his father. It is entirely supported by him, and has an endowment derived from some landed property duly devoted to this purpose.

Babu Surendra Mohan Sinha in memory of his father Babu Ramoni Mohan Sinha has established a very fine hospital at Nathnagar, one of the best equipped in the district. Its out-practice almost equals that of the Sadar Dispensary at Bhagalpur itself. A large indoor hospital is shortly to be opened adjoining this.

At Barari on the extreme east of the town there is a charitable dispensary for out-patients only, which is entirely supported by two brothers, Babu Pran Mohan Thakur and Babu Ugra Mohan Thakur. The Baneli Râj established a dispensary in 1901 at Sultanganj, the headquarters of Banka subdivision. There is a charitable dispensary which was established in 1867. At Bausi, Rani Makum Kumari of Lachmipur supports a dispensary from her own income.

North of the river there are dispensaries at the headquarters of the two subdivisions—Madhipurâ and Supaul. Also there is one at Portabganj established in 1872 by Rai Dhanpat Singh Bahadur in memory of his father Partab Sing, and maintained at his sole expense till 1888, when it was taken over by the District Board. Since 1901 it has been managed by a Committee; and a new building was erected for it by Babu Ganpat Sing, brother of Rai Dhanpat Sing Bahadur, in 1902.

A dispensary was started at Kishanganj—the least healthy tract in the district—in 1893 and it was rebuilt in 1901 by the District Board.

In 1908 a new dispensary was opened at Sonbursa which is completely maintained by the Sonbursa Râj.

In 1909 a new dispensary was commenced at Bhimnagar on the borders of Nepal 14 miles north-east of Pertabganj which will fill a long-felt want.

Thus the whole district is extremely well supplied with medical aid and the out-practice of each shows what valuable aid is rendered and how much they are appreciated by the inhabitants of outlying districts.

The District Board also established a dispensary in 1901 at Bangaon. It was very badly needed there.

The Darbhanga Râj maintains a dispensary at Bhaptiahi in the north of the district at its sole expense. This is not supervised by the Civil Surgeon of the district.

Leper Asylum. A leper asylum at Bhagalpur is maintained by the Church Missionary Society. It provides accommodation for 400 lepers.

Medical Aid. Exclusive of medical officers directly employed by Government or by local authorities, there are many native medical practitioners who follow European methods. In most villages are to be found practitioners who follow indigenous systems—baids, hakims and kabirajes. Barbers are very important socially as well as professionally. Satyas or couchers are generally itinerant practitioners. Their methods are of the crudest.

The Ayurvedic system of medicine is held in the greatest esteem, not so much from religious principles as from the idea that the more drastic operation of European medicines is not so suited to the more delicate Indian constitution.

Among the lowest classes, exorcism by charms and spells is firmly believed in, as all diseases are attributed to the malevolent influence of evil spirits. Cholera in particular is attributed to Kali Mai, and no one ventures abroad at night during a cholera epidemic for fear of meeting with this angry goddess and being infected with the disease by her baneful influence.

However, the constantly increasing numbers that resort to the charitable dispensaries afford ample proof that their benefits are gaining an ampler recognition. Thus from 1890 to 1894 the daily average attendance at all dispensaries was 223 only. In the period 1900 to 1904 it had risen to 584 per diem: though the number of institutions increased somewhat in the interval, the number of patients treated increased in a far higher ratio.

In 1909 the figures have risen to 123,987 yearly for the whole district averaging 1,014 per diem. Surgical treatment is at present in disfavour, but the abandonment of drugs and a willingness to submit to the knife is gradually being noted and the time is not far distant when the enlightenment of the general public in this respect will be in no way inferior to that of the same classes in Europe generally.

CHAPTER V.

AGRICULTURE.

Natural divisions.

THE portions of this district lying north and south of the Ganges differ considerably, regarded from the standpoint of the agriculturist. The northern portion is purely alluvial. The southern portion comprises, in addition to alluvium, various geological formations, as already described in Chapter I. The outstanding feature that distinguishes the agriculture of the southern portion from that of the northern is that in the latter irrigation is only needed when the rainfall is in large defect or very badly distributed; in the former, the southern portion, irrigation in one form or another, is very widespread and is indispensable. Bunds are thrown up across the streams that flow northwards from the hilly southernmost portion of the district, and a network of distributaries, taken from this, lead the waters from field to field. Custom regulates the question of the supply. During the cadastral survey operations that have recently been brought to a close, an attempt was made to record the customary rights of various tenants and villages with regard to the use of the stock of water. It is, however, stated that the villagers generally speaking did not evince much interest in this part of the proceedings. At the end of this chapter are to be found details as to the various methods of irrigation in vogue.

Total area.

The total area of the district may be classified as follows from the point of view of agriculture. The actual figures are those furnished by the Settlement Department.

Total area ... 2,654,620 acres.*

	Acres.
Uncultivable area	261,016
Cultivable waste other than fallow ...	396,327
Current fallow	63,561
Net cropped area	1,684,107

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* This includes 249,609 acres which were only surveyed topographically, for which no detailed records were prepared and no statistics compiled. About half this area would be entirely uncultivable and the other half "cultivable waste".

The municipal areas, 6,400 acres, are also included in this total. No agricultural statistics were compiled except for the purely rural areas of the municipalities.

Areas cultivated for each harvest.

Following the usual division into *rabi* (spring), *bhadoi* (autumn), and *aghuni* (winter) harvests, the following areas are cultivated for each of these harvests :—

	Acres.
Rabi crops	731,560
Bhadoi „	458,477
Aghani „	1,070,265
Total area under crops ...	2,260,302

As usual, a large proportion of the lands can bear two harvests. In the year for which figures are quoted, not less than 576,195 acres bore two crops. Deducting this from the total just shown we arrive at the net cropped area of 1,684,107 acres

Main crops.

The following table gives all the principal crops grown in the district, with the assumed normal area under each crop, and the actual area sown with each crop during the settlement operations.

Class.	Name.	Assumed normal acreage.*	Actual acreage.
Cereals and pulses.	1. Rice ..	1,615,200	997,760
	2. Wheat ...	203,200	110,518
	3. Barley ...	68,900	62,739
	4. Millet (*cholum* or *joar*).	22,000	10,373
	5. Marua ...	123,100	142,683
	6. Maize ...	242,600	114,375
	7. Gram ...	73,700	99,203
	8. Pulses, etc. ...	203,100	435,145
Oil-seeds ...	9. Linseed ...	14,100	94,622
	10. Til ...	2,900	4,256
	11. Mustard ...	38,200	85,524
	12. Others ...	17,200	17,372
Condiments and spices.	13. Various ...	1,000	2,672
Sugarcane ...	14. Sugar ...	63,700	10,768
Fibres ...	15. Cotton ...	14,000	503
	16. Jute ...	22,400	816
Dyes ...	17. Indigo ...	13,000	5,408
Narcotics ...	18. Opium ...	600	463
	19. Tobacco ...	8,000	2,302
Orchards and gardens.	20. Various ...	22,700	39,795
Miscellaneous ...	21. Food-crops ...	69,600	21,515
	22. Non-food crops	87,600	1,590

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* Normal areas are taken from the "Agricultural Statistics." Probably they will be readjusted now on the basis of the more accurate settlement figures.

In spite of some marked variations from the normal it is obvious that the rice crop is far and away the most important crop in the district. Under the heading "Oilseeds" there is a marked tendency to an increase and probably the accepted figures for normal acreage will need to be revised soon in respect of these crops just as a permanent diminution is indicated under the headings Indigo (17) and Sugarcane (14).*

Soils.

The principal types of soil in this district are clay, loam and sandy soils. The different kinds of clay soils are as follows, according to a note on the soils of Bengal, published by the Department of Agriculture:—

Clays.

(*a*) *Kharar* or *Kaiari.*—This soil is blackish in colour: it is sticky when wet and rather difficult to plough when dry. It is best suited for the growth of winter rice. When the rice crop is reaped, peas of various sorts, *khesari dal*, gram and linseed are sown broadcast in the mud before it dries up and luxuriant crops are frequently raised in this way at practically no cost beyond that of the seed.

(*b*) *Khewal.*—This soil is also of a blackish colour, but is more friable when dry than *kharar.* It is suitable for almost all crops except maize, *kurthi*, etc. If it lies very low and goes under water when the Ganges is in flood, the land is called *char.* Such soils grow only *rabi* crops.

(*c*) *Gorimati.*—This soil is of a reddish yellow hue, and produces all kinds of crops if irrigated.

(*d*) *Harin chikai* and *pasooti* are whitish in colour and are suitable for winter paddy.

Loams.

(2) Loamy soils are known as *doras.* If low-lying, winter rice is grown on them generally; if high, various *bhadoi* and *rabi* crops do well on them. This class of soil is found around old village-sites where it receives cow-dung and all sorts of household refuse. It is then generally called *dih* or *goora*, and it is sown with potatoes, vegetables, tobacco, chillies, etc. In low situations, loamy soils are called *tari*, and all crops except maize, *kurthi*, etc., will do well on them.

Sandy soils.

(3) *Balmut* is a sandy loam that will grow anything. *Dhus* is the name given to sandy loam in the Gangetic diara. As it is submerged when the river is in flood, it is used for *rabi* crops only. These crops thrive in it exceedingly.

Soil that is almost pure sand is called simply *balu.* When a thin layer of silt (three to six inches thick) is deposited on the top of sand, it is called *patpar.* In this state it grows mustard well, but as the layer of silt gets deeper it becomes also fit for barley, oats, etc. Diara lands covered with sand are called *balu burd.*

Water-melons do very well in such lands as the melon, when formed, can lie on the sand without rotting, while the roots are far down in the clay beneath.

Diaras.

The gradual growth of *diaras* is an extremely interesting process of soil formation. Where an eddy in the current is the result of a curve or backwater in the stream, the velocity of the water is checked sufficiently to allow the suspended matter to be deposited. The building-up process continues until the sand bank appears at ordinary water-level. The water lying stagnant deposits clay and silt on the sand, and each succeeding flood deepens the layer of clay until at last the *diara* rises above flood-level. If from any cause the deposit of clay and silt is arrested, the *diara* remains mere barren sand. Excellent crops can be raised from such lands, but there is no stability nor certainty about *diara* cultivation. When unable to bear a crop, no one troubles about them. When fertile, they are not infrequently the source of sanguinary riots and the cause of perpetual litigation.

Inferior soils.

(4) Soils over which there is a saline efflorescence due to the presence of alkaline salt, *reh* or sodium salts, etc , which are called *usar*, *kharwa*, etc., are unfertile. Washermen use *kharwa*, so it may be inferred that sodium carbonate or 'black alkali' is found in that earth. In *usar*, it is probably the 'white alkali' or sodium sulphate that is found. The want of subsoil drainage, owing to impermeable strata beneath, causes the accumulation of these alkaline salts.

In the extreme south of the district is found a reddish gravelly soil of lateritic origin. It produces *arhar*, castor, etc.

Climatic influences.

The prosperity or otherwise of the agriculturists—and by far the greater portion of the population is dependent for its livelihood on agriculture—is determined by the rainfall. It must be adequate and seasonable. As rice is the most important crop grown in the district, the rains that benefit this crop exceed all others in importance. For the winter rice crop, rain is needed early in June to facilitate the preparation of the ground and the growth of the seedlings. In July and August rain is needed to prepare for the transplantation. Finally copious rain is essential about the time of the *Hathiya* asterism, at the end of September or early in October, as without this the rice never comes properly to maturity and the produce is inferior in quality and indifferent in quantity.

Rain at these same intervals is also extremely beneficial for the *bhadoi* and *rabi* crops. For the latter especially, the September-October rains if copious give the supply of moisture essential for a good spring crop.

AGRICULTURAL PROVERBS. There are numbers of proverbial sayings and agricultural maxims prevalent among the people telling of the favourable and unfavourable climatic influences which bring prosperity or the reverse. A few of the most interesting are reproduced here:

(a) Ek pani jon barse swati
Kurmi pahire sona pati.

i.e., if one shower even falls in *Swati* (a lunar asterism of Kartik, *i.e.*, October-November), even Kurmi women can wear gold earrings.

(b) Sati pake sat din
Barkha hoye rat din.

i.e., *sati* paddy ripens in sixty days if it rains continuously day and night.

(c) Bed bidit na hokhe an
Bina tula nahin phutai dhan.

i.e., the words of the Vedas are infallible, and paddy cannot ripen before the Balance (*i.e.*, Libra or Kartik=October-November).

In praise of the agriculturists' life the following is interesting:—

(d) Uttam kheti, madham ban,
Nirghin seba, bhik nidan.

i.e., agriculture is the highest profession; next is fighting; next is service, and last of all is begging.

HARVESTS. The three great harvests of the year are known here, as elsewhere in Bihar, as the *rabi* or spring crop, *bhadoi* or rains crop, and *aghani* or winter crop. **Aghani.** The main *aghani* crop is *aghani* rice. This is sown about May and reaped in the following December or January. At first the plants are raised in seedling beds, and they are transplanted later on into the low-lying, wet fields in which the crop eventually comes to maturity. This crop is very largely grown all over the northern portion of the district and covers, according to the latest statistics, an area of about 850,000 acres. The average outturn per acre in a normal year is about fifteen maunds worth, say, twenty rupees. The tenant looks to the result of the *aghani* rice crop as his resource for paying his rent and his mahajan. If the winter rice crop fails, distress in a more or less acute form is bound to supervene.

The question of rents is dealt with in Chapter VII below.

Bhadoi. The *bhadoi* rice crop is also known as the *sati* crop, as it matures in about sixty days. It is not transplanted but is sown broadcast, generally on fairly high land, not suitable for the slower growing winter rice. The *bhadoi* crop furnishes the food-supply for the year for those cultivators who can afford to eat rice. It yields considerably less per acre than the transplanted *aghani* rice, but its cultivation is much less laborious and it reaches maturity in a very much shorter time than the winter rice. Also, the rent payable for such lands is appreciably less than that paid for the land that can bear a winter rice crop. *Bhadoi* rice is grown on about 152,900 acres.

Maize or *makai* is of much importance as a *bhadoi* crop also. It is grown on 114,375 acres It is sown in April and May and ripens in August, but it is often exposed to destruction in that month by floods.

Various millets are grown of which *marua* (*eleusine corucana*) normally sown on 123,100 acres, is the most important. It is largely used as a food-stuff, as it is very prolific and not expensive to cultivate.

Rabi crops.

The most important spring crop is wheat. It covers an area of 110,500 acres in normal years Barley, covering an area of 62,739 acres, comes next. *Dals*, both *khesari* and *masuri*, are largely grown. The former is sown broadcast on silt left behind by receding floods or on wet lands from which winter rice has been reaped. It is believed to cause paralysis owing to the presence of some parasite, but this parasite is killed if the *dal* is cooked by thoroughly boiling it.

Indigo.

Among the many other crops that are grown indigo, tobacco and sugarcane deserve mention. Indigo was introduced into the district about the end of the eighteenth century. The first indigo factory was founded by Mr Glass, then Civil Surgeon of Bhagalpur, in 1793. For many years its cultivation extended and a large number of factories came into existence all over the north of the district, with some along the banks of the Ganges in the southern part. At an early date, however, the reverses that have overtaken indigo planters everywhere since, were noticeable in this district, and the ruined and abandoned factories to be met with in the northern part of it tell the tale of a once prosperous industry that has passed away. In 1901 there were eleven important factories at work in the district, the largest being at Colgong employing over 700 hands. In years gone by, an area of about 13,000 acres was considered normal for indigo. Of late years this has diminished sadly and little more then 5,000 acres are now devoted to this useful crop. Its influence on the soil in which it is grown is extremely beneficial for subsequent crops, as it tends to increase the nitrogenous matter available for the cereals by which it should be followed in rotation.

Tobacco.

Tobacco is mostly grown near homesteads and covers about 2,800 acres only. It is a valuable crop.

Sugarcane.

The area under cane fluctuates greatly. It is an expensive crop to raise, witness the Bihari proverb :—

Sau chas ganda | Tekar adha mori ;
Pachas chas manda ; | Tekar adha tori.

i.e.,—For cane, a hundred ploughings ;
For wheat, fifty ploughings ;
Half of that (25) for rice ;
Half of that (12½) for mustard.

It occupies the ground for a very long time, usually fourteen months. It must be fenced ; it cannot stand water-logging (at least not the varieties most common in Bihar), and its market price fluctuates considerably. Still, dealers in *gur* are always ready to give advances against the crop and this renders it popular, in dry seasons especially. Its normal area was taken at 63,700 acres, but only about 10,000 acres are now found under the crop.

Oilseeds.

Oil-seeds rank high in value among the *rabi* crops. The acreage under them shows signs of a steady increase. This indicates (what Saran district proves conclusively) that valuable non-food crops tend to replace food-crops. It is found economically advantageous to grow the oil-seeds for export and to buy food-grains. It must not be forgotten, however, that, in recent years, the rainfall has for some time been in marked defect. This would tend to an increase in the area under *rabi* crops, which would thrive in places incapable of yielding a satisfactory rice crop.

Extension of cultivation.

From the figures already quoted it would appear that out of a total area of 2,405,011 acres, 261,016 acres are considered to be entirely unfit for cultivation, while about 396,327 acres, though cultivable, are as yet uncultivated.* The average number of persons to the square mile is 494. This is very far below the average in several Bihar districts and it indicates that there is still room for expansion. The density of the population is least in Bānkā subdivision, but the soil there is undoubtedly less fertile than that of any other part of the district, speaking generally.

Buchanan-Hamilton's estimate.

It is of course impossible to give exact figures from Hamilton's statistics for the present district area. Still, for the area dealt with by him, he estimated that over 50 per cent. was waste and entirely unfit for the plough : that about 2 per cent. was fit for the plough but fallow, and that about 48 per cent. was cultivated. A very considerable amount of jungle must have been reclaimed and brought under the plough since that estimate was framed.

The Revenue Surveyors' report.

After the Revenue survey (1846–50), a detailed geographical and statistical report was drawn up in 1852 by Captain Sherwill for the portion of the district that lies south of the Ganges and by Mr. Pemberton for the area lying north of that river. Unfortunately the columns designed to show the proportions of cultivated to unculturable and uncultivated areas are blank for the southern area.

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* These figures are to be taken subject to the footnote on page 69 above.

Mr. Pemberton remarks that the general assessment is extremely low "In 1798 [1793(?)] when the last settlement took place, nearly two-thirds of Bhagalpur north of the river was grass or tree jungle: the assessment of these areas was for the most part nominal, and even the cultivated parts were settled very favourably for the owners of the soil and on mere estimated areas . . . Many vain regrets obtrude themselves here respecting the perpetual settlement of Bengal, knowing as I do the wonderfully improved state (as to cultivation) of these parganas: but it is useless to indulge in them or to comment on the thousand per cent. loss Government is sustaining in consequence of this settlement."

Mr. Pemberton's figures for the four parganas lying north of the river then show nearly 85 per cent of the area as cultivated, 14 per cent. as culturable waste and 1 per cent as unculturable and barren waste. But only the parganas Malhani Gopal, Naredigar, Nisankpur Kurha and Chhai were under consideration.

Increase of cultivation.

It is amply established that there has been an enormous increase in the cultivated area of this district since 1793. The present figures for land revenue demand and for annual rental value, for cess valuation, illustrate this.

The land revenue demand is Rs. 6,05,746

The cess valuation (annual rental) is Rs. 56,81,997.

Comment is needless.

Scientific Agriculture.

Bhagalpur district now possesses, at Sabour, the Provincial Agricultural College, which will, it is hoped, prove a centre from which improved agricultural methods will gradually be diffused over the whole Province. Its foundation stone was laid on August 17th, 1908, by Sir Andrew Fraser.* Its main object is in the first place to provide a suitably trained agency for carrying out the propaganda of the lately constituted Department of Agriculture, and next, to provide a research station for solving problems presented by the agricultural conditions of this Province. In addition to purely agricultural instruction, provision has been made for departments under an Agricultural Chemist, an Economic Botanist, a Mycologist and an Entomologist. Also, a workshop for the manufacture and repair of agricultural implements will be maintained.

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* *Vide* the Quarterly Journal of the Department of Agriculture, Vol. II, No. 2, October 1908.

District Agricultural Association.

To carry out more effectively the objects aimed at by the Department of Agriculture, associations have been formed in most districts of this province. That in Bhagalpur was inaugurated in May 1908. Each member of the District Association is expected to co-operate in furthering the improvement of agriculture in his own neighbourhood, by disseminating a knowledge of the results obtainable by improved methods. The following courses have been suggested as suitable means to this end:—

(*a*) Wealthy proprietors could start a demonstration farm on their own estates, to give object lessons to their own tenants and other cultivators.

(*b*) They could encourage cultivators to adopt improved methods that have been already demonstrated satisfactorily on their own account and assist them (by loans or otherwise) to meet the initial expenditure.

(*c*) The purchase of new or improved varieties of seed and its introduction and distribution.

(*d*) The purchase of suitable manures and their distribution.

(*e*) To encourage cultivators to visit demonstration farms.

(*f*) To distribute widely vernacular pamphlets on agricultural subjects.

(*g*) To promote cattle shows and agricultural exhibitions generally.

(*h*) To enable promising young men to get practical instruction at the Sabour College by giving scholarships, etc., etc.

It is too soon yet to expect much practical result from the activities of this Association. The scheme is excellent and the, motives are most commendable. The future will show how far its objects are attained.

Veterinary Assistance.

The Bhagalpur District Board maintains an itinerant veterinary assistant, the value of whose services is gradually receiving due recognition by the cultivating classes. In Banka subdivision there was an outbreak of rinderpest in 1907 and the inoculation treatment was successfully practised.

Veterinary Hospital.

A public-spirited zamīndār, Babu Surendra Mohan Sinha, lately built and completely equipped a veterinary hospital and made it over to the District Board. It cost nearly Rs. 12,000 and is known as the "Ramani Mohan Sinha Veterinary Hospital," being so called after its founder's elder brother. This institution fills a long-felt want and has a sphere of action of unquestioned utility and of boundless extent before it.

NOTE ON IRRIGATION.[*]

How artificial irrigation is generally effected. *Danrhs* and *Singhas*.

Artificial irrigation which is indispensable over a large area of South Bhagalpur is generally effected by leading off from a natural stream or from a head of water collected in a *bandh* or tank. The channels are called *Danrhs* and their smaller branches are called *Singhas*. They are maintained and repaired by the *maliks*, the raiyats supplying labour in case of small and ordinary repairs. *Danrhs* and *Singhas* are used mainly for the irrigation of paddy fields from *Asarh* to *Kartik* (July to November).

Wells occasionally used for special crops.

Wells are also used, but only for the irrigation of special crops, *e g.* sugarcane or *Kachu.* They are cheap and are dug by the raiyats at their own expense. In some villages *pukka* wells are dug at the expense of the *malik* for the irrigation of sugarcane fields.

Irrigation for *Rabi* crops.

The *Rabi* crops are often irrigated from *Danrhs* if water is available in them at the time. But the *maliks* do not take any interest in this and only the raiyats occasionally dig holes (called *Bhaw*) here and there in the sandy bed of a *Danrh* and draw out water with buckets, etc, for irrigating *Rabi* fields in the dry season. Little importance is attached to this kind of irrigation. It is only during the irrigation of rice fields from July to November that disputes arise, and it is to this irrigation only that all rules and limitations of rights of different parties, whether established by custom or by contract, refer

Irrigation records prepared for irrigation-canals with all connected *bandhs* and tanks

Irrigation records have been prepared only for *Danrhs* or water-channels with all connected *bandhs*. The total length of these water-channels is 892·65 miles, and 646 villages with an area of 406·20 square miles are dependent on them for irrigation. The thanawar distribution is as follows:—

		Villages.	Area.	
Thana	Bhagalpur	61	30·40	square miles.
„	Amarpur	300	179·70	„
„	Sultangunge	64	33·53	„
„	Banka	183	139 68	„
„	Colgong	38	22·88	„
	Total	646	406·19	„

This covers the area about 10 miles on either side of the river *Chandan* north of the subdivisional headquarters of Banka and some area to the west of the river Chir which flows along the boundary of the Sonthal Parganas. For the purpose of comparison the following figures from the Darbhanga and Muzaffarpur Settlement Reports are quoted:—

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[*] Furnished by the Settlement Officer, Bihar.

	IRRIGATED FROM—				
	Wells.	Tanks.	Canals.	Other sources.	Total
Darbhanga	10·4 sq. miles	73 sq. miles.	5 sq miles.	83 3 sq. miles.	170 7 sq miles.
Muzaffarpur	29 „	57 „	1·6 „	9·8 „	97·4 „

Irrigation records prepared with scheme as unit are separate from the ordinary village record.

The irrigation record is separate from the ordinary village record. An independent irrigation scheme has been treated as unit and the record divided into two parts. Part I gives a description in detail of the water-courses, *bandhs*, etc., the plot numbers in the 16-inch map being quoted. It is illustrated by a 4-inch to the mile *mujmili* map showing the boundaries of all the villages concerned, the position of the waterways, *bandhs*, roads, sites of *basti*, etc Special methods of irrigation, if any, are also described in this part. Part II consists of general rules of irrigation from the scheme, the rights of different villages to use the water, and liabilities as to maintenance and repairs.

Definition of "Scheme" taken as unit for record.

The unit thus adopted for the irrigation record usually consisted of a number of irrigation works forming one system with a natural source for its supply of water, not dependent on any other artificial scheme. All schemes have local distinctive names and there was not much difficulty in ascertaining how much was to be included in one record and how much should form a separate record. In cases where two or more independent schemes happened to be connected with each other, inquiries were made as to their origin and history, their owners and such other facts as might throw light on the matter.

When *Mauzawar* system is preferable.

Exceptions were made in two or three cases where a very large number of small water-courses all commencing from the river ended within the same village. In these cases one record was prepared showing all canals together as more convenient and intelligible to the people concerned. In fact, the village or *mauzawar* system is more convenient in all cases of small schemes terminating in the same village or in a group of villages owned by the same *malik*. The system with scheme as unit has been found convenient only in those cases where numerous villages with conflicting rights as to irrigation were concerned. But in other cases it involved useless and tiresome multiplicity of work; at the same time many minor improvement works had to be left unrecorded.

Three hundred and one schemes dealt with.

Altogether 301 records were prepared. Two of them could not be draft published as several villages lay in thana Katoria which had not been dealt with then. The remaining

299 schemes give the total length of water-courses 892·65 miles. The average figures per scheme are :—

Average length of water-course .. ... 3 miles.

„ number of villages irrigated ... 4

„ area irrigated ... ... 2 sq. miles.

The subjoined table gives the details that are necessary for a proper understanding of the nature and extent of some of the most important irrigation schemes in the south of the district.

District No. of scheme	Name of scheme	Length of water-courses in miles and decimals			Number of villages concerned.			REMARKS.
		Main canal.	Branches.	Total	Irrigated	Not Irrigated.	Total	
10	Raj *Danrh* urf Mahashayji.	28 40	53 21	8·67	75	21	96	Owned by Mahashay Tarak Nath Ghose and dug in 1809 A D.
79	Naya *Danrh* ...	21 38	36 64	58·02	28	16	44	Owned by Mahashay Tarak Nath Ghose and dug in 1844 A D.
8	Raj *Danrh* urf *Bilasi*.	10 80	38·40	67 70	49	1	50	Owned by Raj Baneli (old).
	Raj *Danrh* (Panjwara).	9 48	18 76	28·24	20	2	22	Old.
98	Kajhia *Danrh*	...		25 68	15		15	Owned by Lachmipur Estate (old).
87	Jhikta *Danrh* ...	7·84	18·21	25·55	58	2	58	Owned by Raj Baneli (old).
85	*Danrh* Dogbai	5 46	15·97	21·43	18	1	20	Owned by Nand Lal Choudhry (old).
69	Chakaafia *Danrh*	8·08	12·35	20 43	13	3	16	Owned by several *maliks*, dug in 1846.

Mahashay Tarak Nath Ghose is a brilliant example to other zamindārs and he has acquired proverbial fame for the special interest he takes in the proper irrigation of the lands lying in his estate. *Danrhs* owned by him are always kept in excellent repair.

Classification of schemes according to source of water-supply.

For convenience of description all *Danrhs* may be classified as follows :—

Class A.—Those commencing from a river (shallow broad stream like the Chanan).

Class B.—Those commencing from a *kharra* or *jore* (deep channel with high bank).

Class C.—Those commencing from a head of water protected by a *bandh* or from a tank.

The methods of lifting water into the three kinds of *Danrks* are different although the way in which it is ultimately utilized for actual irrigation is the same. The following figures show how the 299 schemes for which records have been prepared fall in these three classes:—

Class.	No. of schemes.	Length of water-courses (miles).	No. of villages concerned.		
			Irrigated.	Not irrigated.	Total.
A.—Wide river ...	179	650·08	620	169	789
B.—Narrow deep stream.	17	148·89	202	26	228
C.—Reservoir ...	73	93·68	143	17	160

All important irrigation canals fall in class A.

Description of the rivers in the area.

Schemes—Class "A"—All commence from the rivers Chandan (flowing right through the middle of the district) and Chir (flowing along the boundary of the Sonthal Parganas) and their tributaries and branches. The Chandan has three tributaries in the district—(1) The Orni in thana Banka, (2) the Bilasi in thana Amarpur and Sultangunge, (3) the Dakai in thana Banka. On the southern boundary of thana Bhagalpur, the Chandan branches out into four streams—(1) the Andhari, (2) the Māhmudā, (3) the Hāhā (Paijormāri) and (4) the Chandan. The nature of these streams and how they afford special facilities to the opening of irrigation canals are very well described in a report of the Superintending Engineer, dated May, 1864:—

"At its greatest width the Chandan is about 1,500 feet from bank to bank. From the long-continued practice of embanking, its bed is actually higher than the lands on either side and more specially than that on the eastern bank. Being a hill stream, it is liable to sudden and violent inundations, but except when in flood, the channel is a dry bed of gritty sand, bounded on either side by an artificial embankment pierced through with innumerable cuts for irrigation purposes". These remarks apply equally now. The embankments still exist on either side of the river throughout its length in thana Amarpur and the innumerable cuts are the mouths of innumerable irrigation canals. The lands on either side are nowhere much higher than the bed of the river and at places actually lower, so that it is not necessary to make irrigation canals very deep. The mouths of the *Danrhs* in the embankments are protected by pipes (made of palm trees) and in several cases by masonry work. In 1864 there were only 6 such *pukka* bridges, now there are over 20. The bridges are provided with sluice gates either of wood or iron, which are let down when the rush of water threatens to damage the crops. In the case of pipes, bundles of straw are sufficient to keep off the water. In some cases where the bed of the river is comparatively low the mouths of the *Danrhs* are open, *i.e.*, not protected by pipes or *pukka* bridges. This is however a source of danger in years of unusual flood. The Superintending Engineer attributed to this the origin of some of the branches of the Chandan, which he says are probably diversions of its course along some ancient *Danrh* in some years of heavy flood. The Chandan flood has done great damage even in recent years (1897) when it burst through the embankment on its eastern bank, and it is a matter of public importance that the mouths of all irrigation canals opening from it are well protected either by pipes or by masonry work.

Mouths of canals protected either by pipes or masonry work.

Necessity of such protection.

Devices for lifting water into *Danrhs*.—(a) *Janghā* (b) *Bhaw*.

Sudden floods lasting usually for four or five days at a time occur occasionally in these hill streams from the month of June to October. During such floods, water would naturally flow into the *Danhrs* without any artificial training devices But when there is no flood, or when there is not sufficient water in the river, the following devices are adopted:—(*a*) A small canal is dug along the bed of the river flanked by *ails* of sand thus diverting a portion of the current into the mouth of the *Danrh* These are called *Janghās*. (*b*) Pits (called *Bhaw*) are dug in the apparently dry bed of the river and the water thus obtained is lifted by means of buckets, swing baskets, or spoons worked on lever, etc. This kind of water is commonly called *Jhaṛna* or *Jhilākī Pāni*. When there are two *Janghās* close by, water in the higher one would naturally ooze through the *ail* into the lower one. This is insignificant, but yet has a local name *Pasaba* or *Kasaba ke pāni*. The term is also used to the water which oozes through the *ails* of one field into a neighbouring field which is lower.

Description of the *Janghā*

The *Janghā* is most important. As floods do not last for many days at a time, or may not come when water is most necessary, people have constantly to work at the *Janghā*. The *ails* of the *Janghā* are made only of such loose earth as is available on spot (only occasionally protected by boulders of stone) in the bed of the river, and they are invariably washed away during floods. The raiyats of the villages concerned usually dig and maintain the *Janghā* at their own expense. In the zamindary of Mahashay Tarak Nath Ghosh the practice is to pay and feed them when *Janghās* are raised for the first time in the year. Subsequent to this they are supplied only with fuel, wood and leaves When, however, the raiyat works for more than a day, he is given food by the *maliks* and this is the general rule in the estates of the Baneli Rāj, Mr. Dip Narain Singh, the Barari Thakurs and others. The local agents of the zamindār fix the terms by which raiyats of different villages should take charge of the *Janghā* and the general rule followed has been worded thus for use in Part II of the record:—

Responsibilities of raiyats and *maliks* as regards construction of *Janghās*.

"The raiyats of all the villages having right of irrigation from the *Danrh* at first raise the *Janghā* and then the raiyats of particular villages keep it in order during the time their respective villages are irrigated. (Rule 16, Part II, Irrigation Record, Appendix A.)"

Special labour is thus necessary to carry water into the *Danrh* only when a *Janghā* or *Bhaw* has to be dug, and it is to the water thus obtained that all disputes, limitation of rights to use water such as *Paris*, etc., are mainly confined.

Disputes regarding *Janghās* and *Danrhs*.

Disputes arise when any party attempts to open a new *Danrh* or a new *Janghā*, or to alter the number or position of pipes placed at the mouth of the *Danrh*, or to substitute a *pukka* bridge in place of pipes. It is commonly believed that the law does not allow such innovations but it is doubtful if the law can interfere and prevent by injunction the completion of any such salutary innovation unless it causes specific damage or injury to a third person.*

Schemes, class B, require strong *bandhs* across the streams.

Rivers with high banks of the kind usually called *Kharrās* or *Jores* are numerous especially to the east of the Bhagalpur-Bausi Road. There are also some to the west of the river Bilasi in the western parts of thanas Amarpur and Sultangunge. In these cases the river is completely blocked by strong *bandhs*, sometimes of considerable length and thus the water is raised to the level of the fields on either side and to the level of the *Danrhs* which lead off from the sides of these *Bandhs*. When the rush of water is too great it is let out by means of openings in the *bandhs* which are called *Kānuās*. Sometimes the *Kānuās* are protected by masonry work with sluice gates or simply with *pukka* walls rising up to certain heights, leaving a free passage for the water above (the latter is called *Chhikta, i.e*, weir).

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* The High Court decision reported at page 826 of volume XIV of Calcutta Weekly Notes (1910) is of much value in this connection. *Inderjit Pertap Bahadur Sahi v. Krishna Doyal Gir.*

Disputes about schemes, class B.

Disputes arise when an attempt is made to raise a new *bandh* in any village, or when a village lying lower down the stream cuts open a *kanua* in an old *bandh* before the owner of the *bandh* has chosen to do so. Disputes in such cases are known as far back as 1836, and in all these suits intricate questions of riparian rights and limitation were involved. In many cases the parties came to terms agreeing that openings of certain widths or weirs of certain heights should be kept for free passage of water to the lower villages. In one case the proprietors of Dhurya were permanently restrained from raising a new *bandh* in the river Gahira on the ground that such *bandh* would affect the prescriptive rights of villages lower down the river.

Some important schemes of class B.

The most important of these *bandhs* are :—

(*i*) The *Bari Bandh* on the river Bilasi in village Bhaluhar about ¾ths of a mile in length, owned by the Thakurs of Barari. It has four *pukka* bridges and *chhiktas* at four places.

(*ii*) The *Gopalpur Bandh* belonging to Mr. Dip Narain Singh about ¼th mile in length. This has got a *pukka kanua* with 11 openings.

(*iii*) The *Jhikta Bandh* in village Jhikta (about ¾ths of a mile in length) belonging to the Baneli Rāj. There is no masonry work in it.

Schemes, class C, correspond to *Ahars* with *pynes* in other districts.

Schemes—Class "*C.*"-These are not of much importance as no great supply of water can be had from them. They correspond to what are called *Ahars* with *pynes* in Monghyr and Patna. *Bandhs* there are large and small in every village all over the country, but most of these only form reservoirs to store water obtained from a *dānrh* or *singha*. Such *bandhs* have been treated as parts of the record of the *danrh* from which they are supplied with water. But there are still a good many *bandhs* in which only the water which drains down the surface of the country during the rainy season, is stored. This water is then led off through cuts (in many cases provided with pipes) in the *bandhs*, and then by means of *Danrhs* or *Singhas*, or simply from field to field. So also in the case of *danrhs* commencing from tanks. When there is not sufficient water swing baskets (called *Sine* or *Sine-karin*), or *Donas* worked on levers are used. These *Donas* are usually made of palm trees, but iron *Donas* have also come into common use.

Disputes about Schemes, class C.

Disputes which arise about these reservoirs usually relate to the damage which they cause to a higher village, when there is too much water in them. The higher village cannot derive any benefit from the reservoir, while the lower village may not require all the water accumulating in it. These result in criminal cases when the higher village forcibly cuts the *bandhs* to let down the water. In such cases the recent records attempt to define the area which properly forms the reservoir by reference to the plot-numbers on the map and thus fix the limit up to which the owner of the *bandh* has by long use got right to store the water even if the result is damage to the lands submerged, whether they belong to him or to some other *malik*.

Branches called *singhas* carry water to distant fields and villages.

It has now been shown how water is conveyed into the three classes of *danrhs*. The methods employed for carrying this water from field to field, or to distant villages and fields are the same. The canals usually run along the highest convenient ridges in the country so that water may easily be taken to the lands on either side. Branches and sub-branches are then opened to take the water of the main channel to fields and villages which are away from its course. Where a branch or sub-branch opens, the place is usually protected either by masonry work or by pipes. The width of the opening or the number and position of the pipes define the quantity of water which the particular branch or sub-branch has right to take. All these are fully described in Part I of the record.

There are two methods by which water is taken to the fields for actual irrigation, (*a*) the *Banokhar* system, and (*b*) the *Mulari* system.

Two systems of irrigating fields.

Banokar system—Paris.

The *Banokhar* system consists in constructing dams across the *Danrh* or *Singha*. The level of the water in it is thus raised to that of the fields on either side. The *ails* of these fields are then cut and water is let into the plot of land close by. When this plot has been irrigated the next lower field cuts its *ail* and takes down the water and so from field to field till all the fields which can be irrigated from the dam have been irrigated. This method of damming is also applied in taking water into a branch (*Singha*) from the *Danrh* or from a branch into a sub-branch. The dam is commonly called a *Dhatti* or *Banokhar*. (*Cf.* Muzaffarpur Settlement Report, 1892–1899, page 259.) The dam or *Dhatti* absolutely stops the flow of water further down the *Danrh* or *Singha*, so that there must always be some restriction of the time during which a particular dam may be kept. This restriction is imposed either (*i*) by *Paris* (turns), or (*ii*) by limitation of irrigable area in a village or Patti. A village or a Patti or a group of several villages or Pattis held by the same *malik* is usually taken as unit in fixing *Paris*. The reason is that all these arrangements are at the entire control of the *maliks* and the raiyats have very little hand in them. These *Paris* are described in full, village by village, in Part I of the irrigation record. In paragraph 3 of Part II, an abstract is also given for convenience of reference. When the *Pari* of one *patti* or village, or group of *pattis* or villages expires the *patti* or village having the next *Pari* cuts the dam and takes down the water to its own dam already raised by this time. The *Paris* however are not adhered to when owing to flood, etc., the *Danrhs* and branches are quite full with water. If the first village of a *Pari* is situated at some distance from the mouth of a *Danrh* so that some time is necessary before the water of the river can reach the outskirts of the village, a period of grace is allowed to this village. It is called *Khurvijan*, and it is after the expiry of this period (usually a day) that *Paris* actually commence. A day means day and night and it is taken as equivalent to 8 *Pahars* and not 10. *Paris* commence when the first *Jangha* has been completed at the mouth of the *Danrh*.

The *Mulari* system.

Where a village is irrigated by the *Mulari* system it has no right to raise any dam across the water-course and has thus to wait till the water in it is sufficiently high to come over to the fields. It is, however, the *Banokhar* system with *Paris* which is most prevalent.

Questions arising with reference to right of irrigation in a village.

In dealing therefore with a scheme with ramifications extending over several *pattis* or villages owned by different *maliks* the principal questions that arose were (*i*) which of these villages had right of irrigation; (*ii*) whether such right was only confined to take *Mulari* water or whether a village or patti had right to raise *Dhatti* or *Banokhar*; (*iii*) in the latter case—what were the *Paris*; (*iv*) if no *paris*—what were the ways by which the time for which the *Dhatti* could be kept was defined, *i.e.*, whether it was well known that only a certain area could be irrigated and that after this was done the dam was to be removed, etc.

Contrivances where two water-courses cross each other.

When two water-courses cross each other, one is made to pass over the other by means of *Donas* or *pukka* bridges with walls, or pipes are placed underneath one for the water of the other to pass through. The number and position of these pipes and *Donas*, and the widths of the openings in the bridges have in many cases been the subject of hot dispute. There seems however to be no restriction in carrying the water from a field on one side of the canal to a field on the other side by means of *Donas* or pipes and there cannot be any reason for such restriction so long as no obstruction is caused to the free flow of water in the irrigation canal.

Khetbaran.

The method by which water is carried for irrigation from field to field without any definite water-course is called *khetbaran*. Where irrigation is done in this way, it has been so described in Part I of the record.

Relative position of the raiyats and *maliks* with regard to irrigation.

The whole arrangement is entirely under the control of the *maliks* and their local agents. The following rules embodied in Part II of the Irrigation Record explain the relative position of the raiyats and *malik* in this respect:—

"*Rule 11.* When there is not sufficient water for the irrigation of all the lands in a village the *malik's* local agents fix *Paris* amongst the raiyats in such a way that all the fields may be equally irrigated. Or, if there is any surplus water in any field the *malik's* local agents arrange to get that water for the irrigation of any other field which could not otherwise be irrigated, in such a way that the former field may not be in any way injured.

"*Rule 12.* Internal disputes amongst the raiyats of a village about irrigation are decided by the *malik's* local agents."

Neglect by zamindārs to repair irrigation work.

It may be apprehended that such arrangement may develop into an effective source of oppression by the *maliks*. But the management and regulation of irrigation schemes must in any case, of necessity, rest with the *maliks*. The rules above describe the existing facts. It is only when the *malik* neglects to look after the irrigation work or keep them in repairs that any hitch arises between him and the raiyats. Such instances were met with in several cases in thana Amarpur. A zamīndār after purchasing an estate tried to enhance the rents of the raiyats but was unsuccessful. He then began to neglect the several *Bandhs* and *Danrhs* in the villages, so that in a short time they had become almost entirely useless.

Customary rights to use of water.

It may be laid down as a general rule that every raiyat in the village has right of irrigation from a scheme belonging to the *maliks* of the village. It is therefore no vague statement when it is noted in the record that a particular village has or that a particular village has not right of irrigation. When the right is confined to any limited area it has been so described in the record, but such cases are very few.

Responsibilities of raiyats and *maliks*.

Rules 13, 14, 15 and 16 in Part II of the record (see Appendix A below) describe the responsibilities of the raiyats and *maliks* as regards maintenance and repairs. These rules were framed after very careful enquiry and they describe the relation of the parties with sufficient accuracy. Rule 13 is to be read with reference to the *Banokhar* and *Mulari* systems described before:—

"The *maliks* of those villages which have right of irrigations from the scheme, are responsible for its repairs and maintenance. They meet the expense in proportion to their respective *Paris* of irrigation, and where the *Mulari* system prevails according to the areas irrigated. If a *malik* does not pay his share of the expenses, he may be sued in court, but the irrigation of the lands in his village cannot be stopped on that account."

This is a general enunciation of the principle which underlies the prevailing custom. There are, however cases in which the *maliks* have made special arrangements amongst themselves, *e.g.*, one may have been allotted a fixed sum of money every year, or another may have entirely been exempted. Total exemption from responsibility for contributing to the cost of maintenance may in most cases be traced to the origin of the scheme when this concession was allowed as compensation for damages to land when the scheme was opened at the expense of another *malik*. For instance the *Naya Danrh* belonging to Mahashayji passes through 9 villages of the Lachmipur Estate at its source. These villages have been given one day's *Pari* in the week and the Lachmipur Estate has not to bear any portion of the cost of repairs or maintenance.

Importance of the Bhagalpur-Bausi road with reference to irrigation.

An important part is played by the embankment of the Bhagalpur-Bausi road which runs almost parallel to the river Chandan about six miles to the east of its eastern bank. This embankment serves not only as a protection to the country to the east against the violent floods of the Chandan, but it is also a high level irrigator, regulating the water necessary for the irrigation of the large area extending up to the borders of the Sonthal Parganas. Numerous important canals (for example, (*i*) the Raj Danrh Mahashayji, (*ii*) the Naya Danrh, (*iii*) the Shampur Danrh, (*iv*) the Dogbai Danrh, and (*v*) the Katiawa Danrh) are crossed by this road at several places and at each place there is a *pukka* culvert or bridge for free passage of water. In two places these culverts are provided with sluice gates which are maintained by private zamīndārs. Besides these principal gates every culvert in the road affords an opening for the irrigation of the lands to its east. The great importance of keeping free openings in the embankment of the Bhagalpur-Bausi Railway, now under construction, thus becomes apparent. This embankment runs close by and parallel to the Bhagalpur-Bausi Road and it does not seem to be impossible to provide openings in the Railway embankment corresponding to those in the road. If this is not done, the agricultural prospects of the large area to the east of the line will be adversely affected. It is further necessary that in keeping these openings the Railway Company should not deposit boulders of stone in the beds of canals and raise up their level.

Procedure adopted in drawing up to record.

The following procedure was adopted in drawing up the irrigation records. The work was taken up when attestation camps were all practically closed. It consisted in calling up the men of the several villages concerned with any scheme at the same time and ascertaining from their statements and close examination of the maps the position of the scheme, its branches and their accompanying *bandhs*, tanks, etc., the draft record was then read out to the people and, if admitted, attested at once. If disputed, the dispute was entered in the dispute list, inquired into and decided immediately or after local enquiry. Part II of the record was also amended to suit the particular case and attested as above. A map on the scale of 4″ to a mile of the irrigated area was then prepared by pentagraph reduction from the 16″ maps already prepared.

APPENDIX A.

Part II. General Rules of Irrigation from *Danrh*.

1. The water of the river comes naturally into the *Danrh*,

(1) when there is flood in the river; and

(2) when without flood there is sufficient water in the river

Besides these, there are three other means by which water can be obtained into the *Danrh* even when there is not sufficient water in the river (1) by making a *Jangha*, *i.e.*, a small channel in the bed flanked by a low *bandh* to divert a portion of the current into the *Danrh*; (2) by digging into the bed of the river and then drawing up the spring water thus obtained; and (3) by taking advantage of what is called *Pasaba* or *Kasaba* water (literally water which oozes through), *i.e.* water which naturally oozes through the sandy *ail* of a higher *Jangha* into a lower *Jangha* or *Danrh*.

2. There is no definite usage regulating the construction of new *Danrh* fed by new *Janghas* from a river which passes through the properties of several *maliks*. The only rule is that if a new *Jangha* is made close to an old one, it must be made in such a way as to leave free passage of water to the latter.

3. The several villages interested in the *Danrh* are irrigated according to the following *Paris*.

4. The *Paris* above mentioned are adhered to only when there is a limited supply of water and not when irrigation is being carried on with flood-water or heavy rain-water. When the *Pari* of one village has come to an end, the village whose turn is next has the right to remove the *bandh* (*Dhatti*) made by the first village.

5. When two or more villages are being irrigated from the *Danrh* at the same time, the upper village (*i.e.*, the village through which the water flows first) cannot take water from the *Danrh* except by means of *Singhas* and the use of contrivances such as widening the *Danrh*, digging a hole near it and drawing water therefrom by means of buckets, etc., is forbidden.

6. No village can increase the number of its *Singhas* or *Dhattis* or alter their position without the consent of the other villages concerned.

7. No adjoining village unconnected with the irrigation scheme can insist on the *Nigarhs* or passages for outlet of surplus water from any village being opened. The number and position of these *Nigarhs* cannot be altered except by the mutual consent of both the villages.

8. Water is taken to every plot or *chakla* of land in the village by cutting open the *ails*.

9. A raiyat of a lower field can open a passage in the *ail* of a neighbouring field which is higher, only when that field has been irrigated or when the flow of water is such that the opening of such passage is not likely to cause any diminution of the quantity of water necessary for that field.

10. If there is any surplus water in the field of any raiyat it is let off by its *Nigarh* or passage for exit of water.

11. When there is not sufficient water for the irrigation of all the lands in the village the *malik's* local agents fix such *Paris* amongst the raiyats that all the fields may be equally irrigated. Or, if there is any surplus water in any field the *malik's* local agents arrange to get that water for the irrigation of any other field which could not otherwise be irrigated, in such a way that the former field may not in any way be injured.

12. Internal disputes amongst the raiyats of a village about irrigation are settled by the *malik's* local agents.

13. The *maliks* of the villages having the right of irrigation from the *Danrh* are responsible for its maintenance and repairs. They meet the expenses in proportion to the periods of their respective *Paris*, and where the *mulari* system prevails in proportion to the areas irrigated. Any defaulting *malik* may be sued in court by the rest, but water for the irrigation

of the village or Patti of that *malik* cannot be stopped on that account.

14. Ordinary repairs of the *Danrh* are made by the raiyats who do not receive any wages for this. But when extensive repairs are made the *maliks* meet the expenses.

15. According to established usage all the *maliks* either jointly or separately repair or cleanse the *Danrhs*. The earth required for repairs is taken from the lands on either side of the *Danrh*, and the earth removed from the *Danrh* is also deposited on such lands, within such limits as are determined by usage. The proprietors or tenants of these lands cannot object to it whether they have any right of irrigation from the *Danrh* or not.

16. The raiyats of all the villages having right of irrigation from the *Danrh* at first raise the *Jangha* and then the raiyats of particular villages keep it in order during the time their respective villages are irrigated.

APPENDIX B.

VOCABULARY OF IRRIGATION TERMS COMMONLY USED IN SOUTH BHAGALPUR.

Ahar.—A reservoir of water protected by a *bandh.*

Ail.—A small ridge between plots of land in the field.

Banokhar.—A dam of earth made across a canal.

Bhaw.—Hole dug in the bed of a river or water-course to obtain spring-water.

Barish.—Heavy rain.

Boha.—Flood.

Bandh.—Embankment.

Chhikta.—Passage of water left in a *bandh* at a certain height so that water can pass out only when it exceeds that height.

Dona.—Sloop or spoon made of palm tree or of iron.

Danda Khamba.—The contrivance of drawing water with double or treble buckets at a time from a well or with *Donas* worked on lever.

Dhatti.—Same as *Banokhar.*

Danrh.—Irrigation canal.

Faras.—Level of the bed of a water-course.

Indara.—A *pucca* well.

Jors.—A narrow stream with high and steep banks.

Johari.—Water which naturally flows down the gradient of the country during the rainy season.

Jangha.—Temporay channel dug in the bed of a river flanked by small *ails* to divert a portion of the current into the irrigation canal.

Jharna. }
Jhila. } —Spring.

Kua.—Well.

Karin.—Or *Sine-karin* means swing-basket.

Kharra.—Same as *Jore.*

Kasaba.—Or *Pasaba,* applied to water which oozes through the *ail* of one *Jangha* into another, or through the ridge of one field to another.

Kanwa.—Opening in a *bandh.*

Khurvijan.—Period of grace given to the first village of a *pari* to allow the water of the river to reach the boundary of that village.

Mulari.—Applied to the system of taking water from a canal without damming it.

Narbaha—The ordinary village establishment of the *malik* to look after irrigation works. He is a labourer paid at Rs. 3 to Rs. 5 per month, and is also supplied with a *kodali.*

Nal or ***Nar.***—Pipe.

Pokhar.—Tank.

Pyne.—A water-course.

Pul.—A bridge.

Paghra.—Applied to water coming down a hill.

Pasaba.—See *Kasaba.*

Pari.—Turn.

Sine.—Swing-basket.

Singha.—Smaller branch water-courses (artificial).

Sulus.—A sluice gate.

Talab.—A tank.

CHAPTER VI.

NATURAL CALAMITIES.

THE earliest famine in this district, regarding which any authentic information is still extant, was the great calamity of 1770; but, as at that time Bhagalpur had not been made a separate revenue centre, being subordinate to the Supervisor of Rājmahāl, no records exist in the Bhagalpur Collectorate referring to that disastrous year. The proceedings of the Provincial Council of Murshidābād however show that, in April of that year, the condition of the district was very bad. Mr. Harwood, the Supervisor, referring specially to Bhagalpur, reported that "the zamīndārs are ruined, the lands not having yielded half produce for the last twelve months." He had already, on the 28th March 1770, in alluding to some lenient revenue arrangements, written:—"Had the misery of the inhabitants been reported to you sooner, and had the ryots received this ease at the proper time, your beneficent intentions would have been fully answered, and many thousands who are now reduced to poverty might have enjoyed ease, if not affluence. But from motives of false policy and self-interest, the (native) collectors in the different parts, during this calamitous season, have pressed so hard upon the ryots to oblige them to make good their engagements to Government, that their total ruin has invariably followed." It is a matter of history how the famine progressed, till the beginning of the new year brought relief in the form of an abundant harvest. In November, Mr. Harwood, in forwarding the abstract revenue settlement for the current year, attributes the deficit to the "impoverished, ruined, and miserable state" of the district.

During the fifteen years following, there are frequent references to drought and scarcity. In September 1775, the Collector reported to the Governor-General and Council that, "as the drought still continues, the approaching harvest affords a very bad prospect throughout my districts, but particularly in those *parganās* where the chief cultivation is the early grain. The late crops were good; but grain has for some time past sold at an advanced price, from the unfavourable appearance of the next harvest. The settlement has been made good, but I very much apprehend great deficiencies in the revenue in the ensuing year. The growth in the most plentiful year not being sufficient for the consumption of the inhabitants, the price grain bears in the markets of my district depends in a great degree on the adjacent provinces from which supplies are drawn." The statement that the grain outturn of the most plentiful year fell short of the consumption, will startle those who are acquainted with the present large export from this district, but it must be remembered that the tracts in the north that are now highly productive were then attached to Darbhanga and Purniah, that the low country south of the headquarters station was a swamp cultivable neither in summer nor winter, and that the jurisdiction of the Collector then included the rocky waste of Rājmahāl.

In May 1779 a severe drought is reported. "As there is no appearance of a change in the weather," writes the Collector, "it is with much concern I am under the necessity of representing to the Honourable Board, that the severe drought which we have experienced in this part of the country for some time past, has alarmed the landholders in general to so great a degree, that they absolutely refuse to make themselves responsible for the current year's revenue, without a considerable remission; or upon such terms as must in the end prove very disadvantageous to Government The country is certainly in a most alarming situation. The lands which ought to have been cultivated six weeks or two months ago, are still lying waste for want of rain, as a result of which little or nothing is to be expected from the *bhadoi* harvest; and the *aghani* or principal rice harvest, which should be sown by this time, will suffer materially if we have not a change of weather very shortly. To add to the distress which the inhabitants must necessarily experience from the extreme heat, the tanks and wells in the interior parts of the country are entirely dried up; scarce a village in the district has escaped being burnt to the ground; the cattle are dying for want of grass; and grain in general, notwithstanding every method is taken to supply the markets as usual, is every day apparently more difficult to be procured, and of course rising in price. The country being in this situation, I have in vain used my endeavours with the zamindārs to prevail on them to renew their leases for the present year's revenue, agreeably to your orders. They absolutely refuse, except on terms which will reduce the revenue about one-eighth, or from Rs. 1,71,771 to Rs. 1,50,300."

Again, in 1783, the same officer, in noticing a partial failure of the crops, gives the following interesting information concerning the food supply of the district:—"The produce of this district consists chiefly of wheat, barley, *kalāi*, *būt* or *gram*, and mustard seed, the greatest part of which is generally exported in the months of May, June and July to Murshidābād and Calcutta; and so trifling is the proportion of rice that none is ever exported, and above three-fourths of what is consumed in the district is imported from Purniah. This resource, however, has of late fallen off very much, and rice is certainly become scarce; but the *bhadoi* harvest which was cut in August and September, and consists of Indian corn, *maruā*, and other small grain, will effectually secure us from any real distress." At the same time, he declared himself unable, without taking special measures, to supply from local sources any troops or travellers passing through his district. He accordingly obtained sanction for the purchase of 20,000 maunds of rice in Purniah, for which he paid Rs 21,800. In 1795, a similar difficulty presented itself; and 50,000 maunds of rice were stored at different points along the main road through Rājmahāl to Monghyr.

The famine of 1866

No special reference to any drought is to be met with in the subsequent records, and distress is not again mentioned till 1865, the year of the great Orissa famine, when it was much less severe in Bhagalpur than in more southern and westerly districts. The following paragraphs are condensed from the report of Mr. R F. Cockerell, c.s., who was specially deputed in the following year to inquire into the famine in Bihar. The extreme pressure of want in this district was confined to the northern *parganās* of Nāredigar, Malhanīgopāl, Nāthpur, Nissankpur-Kūrhā, Uttarkhand, and Kabkhand, bordering on the Nepāl territory, and mainly due to the complete failure of the rice crop, which there constitutes the chief cultivation. In other parts of Bhagalpur, there was only that general distress which is caused by high prices of food unaccompanied by an increased demand for labour, and consequently no rise in its value. In the northern *parganās* these difficulties were enhanced by the failure of the *maruā* crop, which, in its season, forms the mainstay of the poorer classes, and which was almost entirely destroyed in 1865 by the exceptionally heavy rainfall in the month of July. Severe distress was felt in October 1865, at which time the commonest kind of rice had risen to the rate of 11 seers for the rupee. The usual temporary relief was obtained during the rice harvest season and lasted up to the gathering of the spring crops in April, after which prices again increased, and the greatest want prevailed. In June, the Commissioner of the Division directed the attention of all the local officers to the threatening state of things; and a public meeting was held at Bhagalpur, at which a general subscription was set on foot, and relief committees were formed.

On the north side of the Ganges, relief depôts were supplied with grain imported from other districts. The highest average number of persons relieved gratuitously throughout the district during the months of August and September. when the distress was greatest, did not exceed 1,108 persons; and the largest average number employed on labour, supplied as a means of relief during any month, was about 700. The latter were paid at rates varying from 1½ to 1 anna (2¼d. to 1½d.) per diem for each person. No epidemic disease prevailed in any part of the district during the period of distress. There was, however, a good deal of sickness in the town of Bhagalpur amongst the paupers who had been attracted there by the relief measures from all parts of the district. It was generally stated that the mortality was not great in this district, as compared with most of the other districts of Bihar; and it seems probable that the relief measures adopted, though somewhat delayed in their inception, were carried out on a not inadequate scale.

On the south of the Ganges, high prices were chiefly due to large exportation to the Patna Division. The Deputy Collector of Bānkā wrote:—"I think the high price of rice, and of pulses too, is owing mainly to the *mahājans* buying up the grain for export to the western provinces I believe the general outcry at present is not of bad crops, but of the scarcity of grain caused by export. If grain continues at its present price up to the harvest time, the lower classes in this subdivision will not suffer extreme want. I cannot say what the consequences of a bad harvest and exportation combined will be next year, but I think famine in such a contingency is not improbable" In the months of September and October 1865, 46,185 cwt. of grain were exported from the Bhagalpur station of the East Indian Railway, against 13,783 cwt. during the same period of the previous year.

The average prices of food grain in 1865, as returned by Mr. Cockerell, were—rice, 13 seers for the rupee, Indian corn, 18 seers for the rupee, and pulses, 11 seers for the rupee. In the previous year, 1864, they had been—rice, 25 seers for the rupee, Indian corn, 31 seers for the rupee, and pulses, 24 seers for the rupee. The rates in 1863 and 1862 were nearly the same as in 1864, but slightly cheaper. These are average prices. The highest price for rice was 8½ seers per rupee in July and August 1866. Pulses sold then at the same rate. Maize sold then at 16 seers the rupee. There were 1,019 persons on gratuitous relief in September 1866. This is the greatest number recorded. The numbers on relief works were never higher than 441 in August 1866. All forms of relief ceased with the close of the year. The mortality due to starvation as reported by the police was 97 deaths, of which 12 occurred in August, 24 in September, 27 in October, and 14 in November. At the same time, 309 deaths were attributed to disease engendered by want, of which 50 occurred in August, 58 in September, 75 in October, and 51 in November. With regard to these deaths, which were mostly in the north of the district, it must be remarked that Mr. Duff, an experienced planter, gave his opinion with regard to the two *parganās* of Nāredigar and Malhanīgopāl, that "if any cases of death did occur, the persons who died were strangers from the western districts, such as Tirhut and Champāran." On the other hand, Mr. Christian, the lessee of the Government estates in *parganās* Kabkhand and Uttarkhand, stated that from two to three per cent. of the population had perished of starvation. During the whole period of distress, a sum of Rs. 17,416 was available for purposes of relief, of which Rs. 13,561 were realised by local subscription, and Rs. 3,854 were assigned from local funds. Nothing was obtained from Government or the Calcutta Relief Fund. Of the above total, Rs. 12,871 were expended in gratuitous distribution of food and relief works, Rs. 8,287 on the former, and Rs. 4,583 on the latter, leaving Rs. 4,545, unexpended on the 1st January 1867, when the scarcity had ceased to be felt.

The famine of 1874.

The following description of the famine of 1874 is derived, for the most part, from the reports, monthly and fortnightly, of the Collector of the district and his subdivisional officers. They have been condensed as much as possible, only the more important passages being reproduced as quotations. As in the case of all previous scarcities in this district, drought was the originating cause. The rain ceased early in September, and the last heavy shower of the year fell on the 13th of July. The monthly rainfall for the entire year was:—January, ·40; February, *nil*; March, ·60; April, ·55; May ·15; June, ·5·37; July, 11·07; August, 6·68; September, 4·47; October, *nil*; November, ·06; December, ·32; total rainfall, 29·23. In the last year of drought (1865) it had been 64·35, and in 1864, 49·80. In 1872 it was 37·53. The scarcity which followed the comparatively large fall of 1865 was caused, not by any deficiency in the total quantity, but by its irregularity as well as by the partial destruction of the autumn crops by heavy rain in July and August. The fall was small in September and there was none in October; and in the words of the Collector, "no amount of early rain prevents a bad rice harvest. Without rain in

October the crop cannot be a large one." In 1873, the rain was yet more unseasonable than in 1864, and was extremely deficient, the total being only 29·23 as against 51·52 in normal years. The two tracts into which this district is divided by the Ganges are distinct not only in physical aspects, but in their products and in the manner of living of the people. The northern,—comprising the subdivisions of Madhipurā and Suapul, and Thana Bihpur police division in the headquarters subdivision,—has an area of 2,394 square miles, and produces to main food staples, rice and *maruā*, in the proportion of ten to six. The latter grain is grown most in the *parganās* of Harāwat, Kabkhand, and Uttarkhand, rice being very largely cultivated in the *parganās* bordering on Purniah. Some wheat is also produced, chiefly in *parganā* Chhāi. The *maruā* crop is almost entirely reserved for home consumption, and is distinctively the food of the poor. There are two rice crops, the *bhadoi*, reaped in August and September ; and the *aghani*, harvested in November and the early days of December. The area in the northern portion of the district under *aghani* is three times as large as that under *bhadoi*. The latter is exported perhaps to the extent of one half ; whilst the former, if not already hypothecated to the grain-dealer and money-lender, is immediately sold to meet the landlord's demand for rent, and finds its way both up and down country by boat and by rail, the largest purchasers being the merchants of Bhāgalpur and Monghyr, who carry on a large trade with most of the chief towns of the North-West Provinces and Oudh. The wheat is in large part sent to Calcutta for export. Little of the rice is fine enough to suit the European market.

It has been observed that in 1865 the *maruā* was nearly a total failure, being drowned by excessive rain in July and August, but that the *bhadoi* rice was a fair average crop, " the same as in other years." According to the before-mentioned estimates of these two crops, on which the people depend for food, the one that failed bore the proportion to that which was saved of 12 to 5 ; in other words, more than two-thirds of the food supply was cut off. A comparatively good *aghani* harvest followed ; at least, one which had only failed to the extent of one-third. However, just as this relief came in, the great distress in Orissa and other rice-consuming districts of South Bengal began to be felt ; rice was largely exported and its price in Bhāgalpur quickly rose to a point beyond the means of the poorer classes, and particularly of the numerous day labourers. These classes were further unfortunate in not sharing in the benefits of the high prices, as they do not sow much *aghanī* anywhere, and in the *parganās* above mentioned, not more than sufficient to pay the rent. They were left to depend on the one-half that remained of the *bhadoi*, and one-eighth of the *maruā* crop. In 1873 the Collector reported on the 15th November," the *maruā* is, on the whole, good"; and estimated the outturn at nearly three-fourths of a full crop, or what is over a number of years, a fair average crop. Three-fourths of the *bhadoī* rice, on the other hand, had failed, but fortunately as regards the poorer classes, the food supply destroyed was to that which they had to depend on as 5 is to 12, or the converse of the proportion in 1865. The *aghanī* in 1873 was the shortest crop. In the words of the Collector, "the rice of the whole north and west cannot yield more than a one-eighth crop, though in the east and south a half crop may be hoped for." This failure of the *aghanī* crop forced many people accustomed to consume that rice, to subsist on the coarser kinds, and so diminished the food supply to which the poorer classes had to look for support.

The most authoritative account of the state of affairs during the early months of the scarcity is the Minute by Sir Richard Temple, dated 19th February 1874, which is reproduced here:— "The Collector, Mr. V. Taylor, assures me that in those parts of the district which lie south of the Ganges and those which are situate on the basin of the river Kūsī, there is no reason to fear any serious distress; and on the north bank of the Ganges the crops are excellent. Here and there, owing to the high range of prices all over the country, there may be scattered outbreaks of distress. Otherwise, the prospect of widespread and protracted suffering is restricted to the tract which lies on the eastern or left bank of the Tiljūgā, which tract extends eastward till it approaches the 'spill' or basin of the Kūsī, and on the west adjoins the Madhubanī and Darbhangah subdivisions of Tirhut. This tract includes the *thānās* of Supaul, Bangāon, Prātāpganj, in the Supaul subdivision; and the *thānās* of Madhipurā, in the Madhipurā subdivision. The population of these *thānās* is:—Supaul 279,102; Bangāon, 145,088; Pratāpganj, 141,577; Madhipurā, 251,683; total, 817,430. The cause of distress here is much the same as in North-eastern Tirhut—namely, the loss of the principal rice-crop, which failed from insufficiency of rain on a hard soil, peculiarly needing abundant moisture. The case is, however, slightly better than Eastern Tirhut because of the *maruā* crop of August being somewhat larger, the spring crop of wheat being somewhat better, and the supplementary crop, *chīnā*, sown since the recent rain, being susceptible of irrigation. Still, allowing for all these circumstances, the nature of the case in most parts of the above-mentioned *thānās* does not materially differ for the better from North-eastern Tirhut. There is reason to fear that for several months the distress will be severe. The Commissioner of the Division, Mr. Barlow, has given me a careful and elaborate calculation, which he made after consulting the Collector and the subdivisional officers. He reckons on a possibility of 171,651 persons needing assistance for a period of five months; from which he deduces a requirement of 500,000 maunds at ¾ *seer* or 1½lb. per head per diem, to which he adds 100,000 maunds as a margin of security. My own opinion, after the best consideration which I am able to give to the subject, is that some of the percentages assumed in Mr. Barlow's calculation may be exceeded in many parts of this tract, when the worst season of distress arrives. All things considered, I estimate that in *thānās* Supaul and Bangāon 50 per cent. of the population may need assistance in the most distressed half, and 30 per cent. in the other half; that in *thānā* Pratāpganj, not quite so distressed, there would be 30 per cent.; that in Madahpurā, in one-half badly distressed, there would be 50 per cent., while the other half may escape from distress altogether. This estimate gives a total number of 274,650 persons who might need assistance for three and a half months, from 1st June to 15th September; while half this number might need assistance for April and May, and one quarter of this number for March. This calculation at ¾ *seer* per head per diem, gives a total requirement of 733,732 maunds. Looking then to the comparatively isolated situation of this tract, far from the Ganges, close to the hill frontier, having few roads passable in the rains, and few facilities for private trade, adjoining other tracts even more distressed, I consider it essential to the safety of the population concerned—817,430 souls—that 730,000 maunds should be brought within its limits by the 15th June."

The necessary action was taken under this decision and all danger of famine was removed. The railway continued to pour rice into the district; and on the 18th June the Collector reported that of 769,956 maunds, the total allotment finally decided on, 748,994 maunds had been stored, of which 166,728 had been distributed. Seventy-eight miles of road-work had been, up to the same date, completed or taken in hand, on which a daily average of 20,000 persons were employed. In the north of the district, in the four distressed police divisions, 28,217 persons were receiving gratuitous relief; and 16,905, principally women, were employed in light labour, for which they received full wages in rice or money. Before this date the cold-weather crops had been reaped, and their outturn is thus described by the Collector at the beginning of April:—"The spring harvest is now almost over; and in *parganá* Chhāī and the head-quarters subdivision, the crop may be safely put down as a very good one indeed, and above an average crop of ordinary years. In Bānkā subdivision it has also yielded above an average crop. For Madhipurā, taking the whole subdivision together, I am not wrong in putting it down as a three-fourths one. The Supaul officer admits a three-fourths or an average crop. The *chíná* cultivation which is far beyond anything ever seen in this district, is not, taken into account; it is still in all stages of growth." On the 21st of the same month he adds:—"The irrigated *chíná* has been cut, and has proved a very good crop, so much so that ryots themselves admit that those who were fortunate enough or wise enough to sow it this year, are in comfort." He then goes on to describe the position of the people at that period, and incorporates with his own opinion those of the subdivisional officers. The Supaul officer reported:—"No cases of misery and starvation have come to light; a large proportion (on one occasion when an account was taken at the relief centre here, it was found to be nearly 50 per cent.) of our paupers come from Tirhut, and most of them are most worthy objects of charity. As yet very few others than the very lowest classes, and those who, in the best of years, would have been, to some extent, dependent on charity, have been attracted to our relief centres." "There have been a few deaths at some of the relief centres in the Supaul subdivision, which cannot in any way be put down to starvation, and are not to be wondered at when one sees the class of persons who come to them." "Five out of seven deaths were those of residents of Tirhut district; and in most of them I can certify that disease, in many cases of long standing, was the cause, though possibly the end has been accelerated by privation."

As early as the 30th of July the district officers were able to report signs of a speedy cessation of distress. The subdivisional officer of Supaul wrote on that date:—"The weather during the past fortnight has been everything that could be desired. It is on all hands admitted that a fuller and more promising *bhadoi* crop, both *maruá* and *rice*, has not been seen for many years past; it is, moreover, unusually forward, and will be generally ready for the sickle in about twenty or thirty days." To this the Collector added:—"From the Pratāpganj side matters are still better. New *maruá* is already in the market, and selling at 24 seers for the rupee; and when the crop comes well in we shall see it selling at not less than a maund for the rupee; and it must be remembered that this grain is the food of the poorer classes. Early *bhadoi* rice is also here in the market. It is selling unhusked at 35 seers; and the Deputy Collector reports that, before long, it is expected that it will be as cheap as 2 maunds for the rupee. Should this be a fact, the time must be close at hand when all idea of any distress in this portion of the district must be given up." The report of the Madhipurā officer on the same date is interesting:—"The crops are looking exceedingly well everywhere, only the lowest lands having been so far flooded as to injure the crop on them. A zamīndār who visited me the other day said he was astonished to find almost every field sown in this subdivision, and said he believed it was owing to fewer relief works having been started here than elsewhere. I have purposely lessened the works lately in this subdivision, in order to allow employers to get their usual labourers I am glad the desired effect has resulted." Up to this period 422,577 maunds of Government rice had been expended in relief.

On the 7th of October the last fortnightly narrative was submitted. It gives, in appendix, the following details of expenditure on relief —Disbursed by District Engineer for relief works, Rs. 1,88,000; by officers in charge of transport arrangements, Rs. 5,28,393; for construction of storehouses, Rs. 6,750; advances made to trustworthy residents for purchase of grain, Rs. 70,400; advances made to traders for purchase of grain, Rs. 1,600; advances to the Bhāgalpur municipality, Rs. 5,000; advances made to zamīndārs and others for land improvement, Rs. 7,625; advances to zamīndārs and others for helping their tenants, Rs. 1,03,900; total expenditure, Rs. 9,12,668. It must be remembered in calculating the entire cost of relief in the Bhāgalpur district, that the above total is exclusive of the cost of the Government imported grain; and also of its carriage by railway to the various railway stations of the district. On the other hand, a large proportion of the expenditure in money and grain consisted of recoverable advances which were afterwards largely realized.

The monthly average number of persons employed on relief operations varied from 1,351 in November 1873 to 32,637 in May 1874. The numbers gradually diminished after that month, but no big drop occurred till September in which month 12,002 was the average, the average for August having been 29,424. In all the equivalent of 1,77,847 persons for thirty days were relieved.

Scarcity in 1889. In 1889 Supaul subdivision suffered somewhat from the loss of a large part of the winter rice crop consequent on a deficiency in the rainfall of 1888. In May and June there was considerable distress, but favourable rains set in and relieved the tension of the situation. Advances up to Rs. 17,458 were made under the

Agricultural Loans Act and this enabled the cultivators to sow for the ensuing harvest.

Scarcity in 1892.

In 1892 a large part of Supaul and Madhipura subdivisions suffered from the scanty rainfall of 1891 and the consequent short crops. Relief works were opened in January. In March the average number on them was 3,494 per day. The numbers rose rapidly to a maximum of 12,370 in June and fell again just as rapidly. All relief works were closed at the end of June. Over Rs. 37,000 were advanced in loans. Private sources contributed Rs. 47,000 to the relief of this distress.

Famine in 1896-97.

The scarcity in 1896-97 was due mainly to the general rise in prices consequent on the widespread failure of crops in Upper India which caused prices to advance rapidly. The free supply of food grains was exported, and in consequence the local supplies fell short. Between October 1896 and September 1897 the total exports of food grains from the district exceeded the imports by nearly 83,000 tons. The same is true of the scarcity in 1892 but to a less degree. The experience of those two years makes it difficult for local officers to calmly acquiesce in a policy of unrestricted export, in consequence of which hundreds of thousands suffer privations that a few bunnias may grow wealthy. It is the poorest of the poor that suffer the pinch of scarcity first and that recover from it last At times the greed of the local grain dealers brings its own punishment. Thus in 1903 around Banka, in consequence of the failure of the rains, the local bunnias put up the prices. The result was an indiscriminate and unrestricted outbreak of grain looting that lasted for three days about.

In 1896-97 the area most affected was that bordering on Darbhanga on the west, with Supaul as a centre. The Supaul subdivision has always suffered most from famine and scarcity. The winter rice crop in 1895 was very short owing to early cessation of the rains. In 1896 there was a prolonged break in the rains from July till August 20th, and no rain at all fell after September 20th. Rice rose to 7⅜ seers in June 1897, and maize to 9½ seers. These prices were phenomenally high. Relief works were opened in January and attracted labour till July. Early in May, the daily average on relief works reached 24,465. It declined thereafter.

It is very noteworthy that in this year the death-rate was only 27·03 per mille for the whole district. The figure for the previous year was 37·08 and for the previous quinquennium 34·09.

Relief from private sources was liberally given. Upwards of Rs. 26,000 were distributed in grain or money doles under the provisions of the Indian Famine Fund. The total expenditure was about Rs. 1,64,500 out of which Government met Rs. 56,400, and the District Board the balance.

Scarcity in 1902.

Scarcity was apprehended in 1902 owing to the scarcity and ill-distributed rainfall of 1901. Supaul again was the centre of the area most affected. Mr. Shirres, the Collector, pointed out that labourers around Supaul are naturally indolent. Till comparatively lately they were mostly herdsmen in charge of grazing grounds, and they have not as yet become inured to really hard work. The mean rainfall for 1901 was only 35·5 inches against an average of 51 inches.

Floods in 1906.

The tract of country around Supaul and Madhipura was *devastated by exceptionally high floods in August-September* 1906. As usual the distress was severe until the waters subsided. Agricultural loans were freely distributed. The receding waters left a fertile deposit of silt behind, which yielded an excellent *rabi* crop in the spring of 1907.

Scarcity in 1908-09.

The mean rainfall of 1908 was only 24·4 inches—the lowest ever recorded and less than half the average. At Bhāgalpur itself only 18·04 inches were registered in the whole year. At Supaul 23·96; at Madhipura 22·00, and at Banka 33·6. The result was inevitable. The *bhadoi* crops failed entirely and the *aghani* crop was a complete failure in many places. Fortunately, the Kosi floods gave bumper crops of *bhadoi* and *aghani* in the eastern portions of the two northern subdivisions. This saved the district from what threatened to be the worst famine yet known.

The first warning of impending danger was submitted as early as August 1908 when it was obvious that there was a widespread failure of rains. After August, the only big fall of rain was registered at Banka, 10·97 inches having fallen in September and ·89 in October. But this was by no means a general fall as the northern portion of this subdivision suffered as much from short rainfall as the Sadar subdivision. South of the Ganges there were literally hundreds of square miles left absolutely fallow, without a crop of any sort being planted out. But the crops of previous years had been good and the cultivators were well prepared to stand a strain. The landless labourers cleared out in thousands to look for employment elsewhere. The luxuriant crops in the east of Supaul and Madhipura subdivisions, north of the river, attracted many: large numbers went into the lands on the Purnea side of the Kosi and many others went eastwards to get employment in the rice lands of Bengal proper. It was computed that in August and September about 70,000 people crossed the Ganges from south to north in search of work.

Agricultural loans were freely distributed to enable the cultivators to sow *rabi* crops, but unfortunately the failure of the hoped-for rains in December and January nullified to a large extent the beneficial results that were expected.

The local officers were able to induce zamīndārs and other wealthy persons to avail themselves of the abundant supply of labour for the excavation or re-excavation of tanks and wells: and for the construction of bunds and irrigation channels. The Banaili Rāj completed an embankment along the Tiljūga river at a cost of over a lakh and a half of rupees. This should protect a large area in future from the destructive floods that have worked such havoc in the past.

In the south of the district the irrigation channel known as the Mahashay Taraknath Ghosh's Raj Dourh from the Chandan river saved a large part of the Rajaun outpost area. Steps were taken to lead some of the Chandan waters into the beds of the Kadwa and Gahira rivers and irrigation channels were also cut from the Chir river.

In April 1909 about 485 tanks were in hand in the north of the district and the construction of the Pertabganj-Bhimnagar branch line railway embankment gave constant employment to over 2,000 labourers.

The Tiljūga and Dimra rivers were bunded up and every drop of water that could be got from them was lifted up by the usual *karins* (palm-tree trunks hollowed out) to the higher levels and used for irrigation. Water was led from the reservoir formed by damming up the Tiljūga as far as nine miles north and south, and four miles east and west.

The benefits of irrigation in those parts of the district, especially in the north of it, were so manifest that strong representations were made to Government to have the possibility of utilizing the Kosi waters for a general irrigation system with the existing channels as distributaries considered from a professional point of view. The suggestion was that head works should be constructed above Birpur where the channel of the Kosi does not fluctuate and oscillate over as large an extent of country as it covers lower down. At about 15 miles north of Birpur it emerges from a sharply defined gorge in the hills, and this exit is certainly fixed and invariable, but it is some distance outside the borders of British India.

This is the fatal defect in the scheme and on this account it was dropped after some preliminary investigation. To secure a sufficient head of water, the reservoir and training works should be constructed just where the river emerges from the hills—and as this point is in Nepal and as it was believed that the consent of the Nepalese authorities was not likely to be given, the matter went no further. This is regrettable, as a scheme that would irrigate nearly two thousand square miles would be at all times a boon.

A further objection was that a similar proposal to use the existing river beds as distributaries had been already tried in Saran and had failed utterly. Water could not be got along them when most needed. Finally the shifting and unreliable nature of the Kosi had to be considered. "The Kosi is an impudent hussy that leaves her bed at night and seeks strange beds so that every engineer will have nothing to do with her for fear of his reputation". This criticism by an experienced Irrigation officer caused the scheme to be dropped.

In the south of the district irrigation has been systematically practised for a long time as already described in chapter V. The river Chandan was restrained by a bund for this purpose but breaches of the bund by sudden floods are not uncommon.

Chandan Floods.

About 1860, the great main road from Bhāgalpur through Deogarh to Sūrī was constructed across these lowlands The work had scarcely been completed, when a great flood came down the Chandan, swept through the petty embankments of the zamīndārs, breached the new road in several places, and broke down some bridges. Attention was strongly called to the condition of the river, which was made the subject of a report, in May 1864, by the Superintending Engineer, Northern Circle.

From this report the following particulars are derived :—The Chandan is a river which has its source in the hills about Deogarh in the Sonthal Parganas, and, for the first half of its course, is fed by numerous tributaries, also rising in the hills. At about thirty miles from its embouchure into the Ganges, it begins to throw off branches to the eastward, and, twenty miles nearer its termination, also to the westward. It thus gradually loses nearly the whole body of water it brings down, the main channel at its junction with the Ganges being reduced to insignificant dimensions. At its greatest width, the Chandan is about 1,500 feet from bank to bank. From the long continued practice of embanking, its bed is actually higher than the land on either side. Being a hill stream, it is liable to sudden and violent inundations ; but, except when in flood, the channel is a dry-bed of gritty sand, bounded on either side by artificial embankments pierced throughout with innumerable cuts for irrigation purposes. The principal of these, six in number, were then (1864) spanned by temporary bridges. The protecting embankments being entirely in the hands of the riparian proprietors, and under no systematic control, they were liable, from the ignorance and neglect of those in charge of the irrigation openings, to be extensively and frequently breached at the most inconvenient times and places, thus causing occasionally the divergence of the entire volume of the Chandan flood from its proper bed through one or other of those gaps. The Bhāgalpur to Bausi road runs parallel to the river for the entire distance, acting throughout as a high level irrigator to the neighbouring land; and the great number of bridges and culverts provided in the road embankment, shows how much water is required for the use of the country beyond. The six following *nālās*, or drains are each nearly as wide as the Chandan itself, at the points from which they respectively branch, viz., the Gūrdhāi, Phulbārī, Pinjamnārī, Purāinī, Kokārā, and Razalahār; and the aggregate cost of bridging these permanently, with due provision for the contingencies of flood, was estimated to be three or four times as much as that of bridging the Chandan about Purāinī. These cuts were all undoubtedly artificial in their origin, and have been gradually enlarged to their present dimensions by successive floods. To illustrate the position, the case of the Purāinī cut may be cited. Previous to the rains of 1863, it was only from thirty to forty feet in width. But, in consequence of a large and permanent breach formed in the embankment of the Chandan, it grew to three times that size; and nearly the whole river flood was diverted into it at a bend in its course, where it seems scarcely possible to effect any permanent repair. At the same time, three channels to the south of it became comparatively dry. The landowners gave no sign of any intention to repair the breach; and it was proposed that the management and control of the Chandan embankments should be vested in the Executive Engineer in charge of the road, the cost of repair, &c., being borne, as now, by the riparian proprietors. The water-supply required through the different branch channels having been once definitely fixed, with the concurrence of all interested, the openings into them from the river could be permanently arranged for, and subsequently the channels themselves bridged at a considerable saving to Government. The first cost of building up and securing the mouths of these escapes might be borne by Government, as the outlay would result in a saving in the bridging of the road; but all subsequent expenditure for keeping up the embankments should fall on the proprietors, being for the benefit of their lands. The Commissioner of the Bhāgalpur Division was favourable to the adoption of these proposals, provided the consent of the neighbouring landholders could be obtained. Nothing, however, was effected, except what the influence of the Commissioner and the Magistrate induced the landowners to do. The latter were most willing to bear any reasonable expenditure for the protection of their lands and the regulation of irrigation. The Magistrate thus describes the manner in which they had previously arranged for the repair and maintenance of these embankments. "When any expense of magnitude is incurred, the amount of benefit which each landholder will derive from the work when completed, is calculated; and the cost is then rateably divided on that basis among the proprietors. The money is collected, and all benefited send ryots to assist in the accomplishment of the work; these ryots are fed daily, but do not otherwise receive any remuneration, while the regular *beldārs* who may be employed are paid at the ordinary rates. Petty maintenance repairs are effected by the ryots themselves on each estate; and it is only when extensive works are required, that the above system is resorted to."

The lands are still exposed to ruinous floods; but the road having settled down and being better bridged, the attention of the executive authorities is less drawn to the permanent injury to the country caused by the floods. Down to the present time, only a cold-weather crop is grown on a tract of country covering some 150 square miles, chiefly because the danger of floods from the Chandan is so great, that no crop is grown during the rains. In many years the injury extends over a much larger area, and devastates a regularly cultivated country.

During the scarcity of 1874, embankments were one of the forms of earthwork labour on which the able-bodied recipients of relief were employed. Many were made by the resident landholders, with money borrowed from Government. The principal of these are—one in the Government estate of Rājanpur in *parganā* Kabkhand, erected by the Public Works Department, along the banks of the river Parwān; and one erected by Mr. Christian, indigo planter of Bangāon, on the banks of the river Dimrā, in the Uttarkhand *parganā*. The other embankments are of less size, and are scattered over the subdivisions of Madhipura and Supaul.

Cyclonic cloud-burst.

In 1899 (September) the eastern part of south Bhāgalpur including the country about Colgong suffered very severely from a heavy flood. Owing to the bursting of a cyclonic storm the river Chandan breached its embankments and flooded all the country in the neighbourhood of Gogha, washing away the railway bridge near that place. At least 1,800 lives were lost and 25,000 houses were destroyed. Numbers of cattle perished, and loans were freely given to enable the ryots to purchase new cattle.

CHAPTER VII.

RENTS, WAGES AND PRICES.

Cash rents.

UNTIL the completion of the recent survey and preparation of a record-of-rights under Chapter X of the Bengal Tenancy Act, really accurate figures showing the incidence of rent on various classes of tenancies in the different parts of this district were nowhere to be found. Reference must be made to the Final Report on those operations for a detailed analysis of the rent question in this district. The following figures present a summary of the results arrived at.

The incidence of rent per acre in the case of raiyats at fixed rates was found to be Re. 1-4-0: for settled and occupancy raiyats it was Re. 2-10-6: for non-occupancy raiyats it was Re. 2-13-3: and for under-raiyats it was Re. 2-1-7: the average for these classes of tenants (excluding under-raiyats) worked out at Rs 2-10-5 per acre.

The great bulk of the tenants (namely 96·38 per cent.) consists of raiyats with a right of occupancy (including raiyats at fixed rates and settled raiyats). The average rents per acre payable in each thana by those tenants varies considerably. Starting with the two subdivisions north of the river we find the average, thana by thana, to be as follows:—

Subdivision.	Thana.	Incidence per acre. Rs.	A.	P.
Supaul	Supaul	2	10	1
	Partabganj	1	9	7
Madhipura	Madhipura	2	5	1
	Kishanganj	1	14	0
	Bangaon	1	15	9

South of the river the details are as follows:—

		Rs.	A.	P.
Sadar	Bhagalpur	5	3	8
	Colgong	3	4	8
	Sultanganj	5	2	10
	Bihpur	2	2	11
Banka	Banka	2	2	5
	Amarpur	4	10	8
	Katauria	1	7	11

Produce rents.

Produce rents are of more importance in the area lying south of the river Ganges than in the northern portion. Irrigation is more generally practised in the south, because it is always useful and even essential there. To the north it is of use only in seasons when the rainfall is abnormally short. The details show that an area of 157,073 acres is held on produce rent—the division of the crop into two equal shares being the commonest form of this rent. But instances in which the crop is divided into unequal shares are by no means unknown.

The Bengal Tenancy Act provides (section 40) a method by which tenants who hold lands on produce rent can have this commuted for a cash payment. Tenants freely avail themselves of the opportunity afforded by the presence in their villages of Revenue Officers to apply for commutation. Widely divergent views are held as to the advisability of this. Lately, owing to the high prices that prevailed, tenants were extremely anxious to get their rents fixed on a cash basis; but it is doubtful if they will be pleased with the results when prices have fallen to a normal figure. Another disadvantage resulting from wholesale commutations of produce rents for a cash payment is that the landlord becomes a mere rent-collector and is—or at least will tend to develop into—an impersonal head, utterly careless whether the raiyats get a good or a bad crop. When paid in kind, the landlord stands to lose very largely if the crops be indifferent over a large area and hence enlightened self-interest made landlords look after the maintenance of embankments, reservoirs and irrigation channels. It is to be feared that this stimulus will be wanting in future and that the ultimate results may prove disastrous.

Finally, there is an ineradicable conviction in the heart of the average unlettered tenant that he has no permanent rights in any lands held only on payment of produce rents. This belief encourages applications for commutation.

In the lately-concluded operations, applications for commutation were presented, in respect of an area of about 12,000 acres. The average rent per acre resulting from the commutation was Rs. 6-2-3. On the other hand, it must be borne in mind that the Bengal Tenancy Act lays down strict limits (often not observed, it must be admitted) as to the amount and frequency of the legal enhancements of cash rents that may be made. No such limit exists in the case of produce rents and wholesale extortion results when the produce rent is fixed not by a share of the produce but by a bulk amount of grain or its market value at the time of the harvest (*mankhap*), determined at random and variable at the whim of the local tahsildar. This system of produce rents embodies all the vices of the cash rent system without any of its advantages.

Former rents.

The figures given in the report of the Revenue Surveyor (1862) for incidence of rent in the various parganas show amounts varying from about 5 annas to about Rs. 2-10 per acre. The figures actually given are for bighas of which the area is not mentioned but as the bighas varied from 3,600 to 5,057 square yards (an acre being 4,840 square yards) it is impossible to select the particular bigha for which the rate is quoted.

Buchanan Hamilton gives a very interesting account of the state of things at the time he made his survey (circa 1812.) He mentions the practice of not fixing the rent till the crop was grown as fortunately fallen into disuse. The *mustajiri* system was prevalent in the south of the district. He was convinced that the landlords made enormous profits but, owing to their apprehensions that the Permanent Settlement was not unalterable, they were at great pains to conceal the extent of their profits. They submitted statements showing that the retention of their *zamindaris* caused them a heavy loss, but he regarded such statements as totally unworthy of credit. In some places they avoided extensions of cultivation fearing to exhibit evidence of making much profit from their lands.

The money rent in several parganas was about one rupee for a bigha of 2,525 square yards—or a little over half an acre : this is approximately two rupees per acre. The lands were usually leased out on short terms but tenants rarely cultivated the same lands for more than two years. Apparently it was the custom to accept a nominal rent for the first year when soil was newly broken (called *khil*) and taken under cultivation for the first time. In the second year a slightly higher rent (called *kam*) was taken. This was meant of course to attract new settlers but it certainly tended in practice to letting lands run into fallow after two years' cultivation. It is obvious that such a custom could prevail only where almost unlimited facilities for taking up new lands of fair quality were afforded to the cultivators These reserves of unbroken lands no longer exist, with the obvious result that the tenants are more than ever at the mercy of their landlords. The demand for tenants that prevailed in years gone by has now given way to a demand for land and this naturally produces rack rents. The vast extension of cultivation that has come about in the last century may be inferred from this alteration of agricultural conditions.

Buchanan-Hamilton also remarked that labour was scarce at the time of his investigations It was then considered extremly disgraceful to work for hire, so much so that few tenants of land would admit that they ever worked elsewhere than on their own lands. No doubt the existence of bondsmen or slaves, as he calls them plainly, helped to make daily labour appear an indignity. Some men cultivated the landlords' land for a share of the crop. Some were hired for the season or for a month or for a day. Subletting by actual cultivators was very rare: in the extreme south it was known and these under-raiyats as they would now be called were then known as *koliaite*. This term is known at present in parts of Purnea district.

Towards the east, only one crop a year was grown. Very little preliminary cultivation was given to the ground, and the cultivators were content to get enough only to live upon from their efforts

In the south of the district subinfeudation was rather common. Very often the middleman made no profit whatever out of the rents he collected from under-tenants, but had to pay it all over to his landlord, as well as pay him a rent for the lands he personally occupied. This system is a survival of an old method of settlement whereby one man was held responsible for the rent of the whole village. Formerly he may have been a man of some position and influence, but now there is little if any prestige attaching to such a post.

Slavery.

Slaves were called *nufur* (male) and *laundi* (female). They were found mostly in the part of the district near the Monghyr border. They were mostly employed as agricultural servants and if there was no work to do on their owner's farm they might take up casual employment elsewhere. Slaves were always of Dhanuk or Rawani caste. They could be sold at the whim of their master, but they were not often brought to sale. As a rule slaves were intermarried if possible. If a slave youth married a free girl or a girl slave of another master, the youth's master had no claim on the children. If a slave girl married either a free man or the slave of another man, her master claimed all the children. The free man who married a slave girl was himself sometimes, but not generally, degraded to slavery: in other cases he became a *chutiya-gulam* (cunno servus) and worked for his wife's master for the usual daily allowance of six pounds of grain. He could not however be sold by the owner of his wife.

Peculiar tenancies.

A peculiar form of tenancy is that known as *halhasila*, is found in Bhagalpur. The tenant pays rent for the lands cultivated by him according to the nature of the crops grown on them and for fallow land, at the rate paid for that land in the previous year or at a special rate for fallow land. Sometimes the rent is levied on the area actually cultivated, irrespective of whether it bears a crop or not: and sometimes on the cropped area only.

Wages.

Agricultural labourers are still paid in kind almost universally at about two seers of paddy per day. Hence they are untouched by the variations in prices of food crops as long as there are any agricultural operations in progress yielding a crop worth harvesting. The following table shows the average daily rate of wages for men of the artizan class at intervals during the last 15 years:—

		1895. Annas.	1900. Annas.	1905. Annas.
Carpenter—				
Superior	...	8	8	8
Common	...	5	5	5
Blacksmith—				
Superior	...	8	8	8
Common	...	6	6	6
Gharami, (*i.e.*, thatcher, etc.)	...	6	6	6
Cooly—				
Man	...	3	3	3
Woman	...	1=6	1=6	1=6
Boy	...	1=6	1=6	1=6

These rates appear to have been fairly constant. The number of labourers does not appear to be in excess of local demands.

Prices.

Taking four staple articles of every-day consumption we find the following prices in seers per rupee prevailed in the years given, at the end of March each year, in Bhagalpur:—

		Wheat.	Rice.	Gram.	Salt.
1895	...	14·8	17·10	18·15	10·1
1900	...	13·4	13·14	17·4	10·0
1907	...	7·8	8·3	8·12	20·
1908	...	9·8	8·14	12·10	20·

The very marked rise towards the last years quoted is due directly to the extreme local scarcity that prevailed in those years and less directly to the general rise in prices that has been noticed all over India. Various explanations based on diverse economic theories have been put forward to account for this very widespread increase in the cost of the barest necessaries of life

Perhaps the soundest, if not the most plausible as well, is that based mainly on considerations of currency.

Mr. Shirres gave the following explanations for the rise in prices in 1902:—(1) An unprecedented succession of bad harvests affecting an abnormally large proportion of the cultivated area of India as a whole (2) The extension of jute cultivation which now covers more than 3,500 square miles of land capable of bearing rice. This explains the exceptional rise in the price of that grain. (3) The diversion of labour from agriculture to industry; (4) The continuous import of money which has apparently influenced prices for the last century.

It may be observed that the second explanation is untenable if it is understood to mean that the growing of a crop of jute necessarily excludes the possibility of raising a rice crop from the same field in the same year. This can be done. It requires very hard work, it is true, but it *is* done when the price of jute is low.

A further explanation is that during the last five years the price of jute has been so high that a great amount of money has been poured into the jute-growing districts. With his pockets full after a successful jute season, the cultivator will not grow more rice than is required for the support of his family. Consequently there is only a very small surplus on the market for sale, and those who must purchase their rice in the open market have to pay accordingly.

Material condition of the people.

It is generally admitted that there has been an all-round advance in the general condition of the people in this district as well as in Bengal generally. The standard of living is gradually rising and the petty luxuries of yesterday are becoming the necessities of to-day. The progress is slow but it is none the less sure. The improvement of inland communications facilitates the gradual spread of imported commodities and competition for markets on the part of manufacturers in the western world keeps the prices at a reasonable figure. It is extraordinary what a variety of imported articles can be found even in the remotest country bazaars, and as a rule, a very large proportion of them are of other than English manufacture. Cotton piece-goods, kerosine oil, sugar, salt, umbrellas, shoes, cigarettes, soap, scents, enamelled ware vessels for domestic use and various imported miscellaneous articles are everywhere exposed for sale.

The agricultural classes enjoy a modicum of comfort if not of prosperity. The labouring classes can find a constant demand for their services in other districts. It was remarked in the Census Report of 1901 that Bhagalpur shows a larger amount of inter-migration with contiguous districts than any other district of Bihar. In every 10,000 of the enumerated population, 514 were immigrants, mostly from contiguous districts. But a considerably larger number (595 per 10,000) of persons born in this district were enumerated elsewhere—most of them again in contiguous districts. The actual net excess of emigrants over immigrants was over 20,000 individuals.

No doubt the decay of the indigo industry has lessened the demand for labour in certain localities among day labourers and carters, but facilities for temporary emigration are now far greater than formerly and they are availed of freely when occasion compels. It has already been noted that during the scarcity in 1908, very large numbers (possibly as many as 70,000) of unemployed went from the south of the district across the Ganges into that part of Madhipura thana in which a good rice crop created a demand for labour.

The mahajan class prospers here as everywhere else at the expense of the old landed proprietors whose improvidence, extravagance and consequent gradual impoverishment make them an easy prey to the usurer's wiles. The usual stages in the downward course are as follows. First stage, a loan on mortgage, without possession: then a mortgage with possession of part of the property. Then possession of more, and eventually sale of it. Owing to the heavy incumbrances, no one finds it worth their while to bid except the money-lender. The phenomenon is not infrequent of a *kaya*, as these money-lenders are generally called, beginning with a small cloth shop and rising in a few years to a position of very marked affluence.

Among the professional classes, the lawyers and doctors do fairly well. The increased cost of living has however told very hardly on the struggling members of these professions and on all classes of Government servants whose income is stationary or practically so, as their expenses have gone up in a very marked manner. Fortunately, at present (1909-10), thanks to the plenteous harvests of the last year, the prices of food stuffs have fallen to a reasonable level.

Relations of landlords and tenants.

The following extracts from the reports of the District Magistrate (Mr. F. F. Lyall) for the years 1907-08 and 1908-09 need no comment. They show that in many instances landlords who ought to know better are absolutely devoid of conscience in dealing with their tenants. It has been said elsewhere that the law interferes and punishes the man who steals even an anna's worth of his neighbour's property, but it protects the man who robs half a countryside, with or without the appearance of a technical legal sanction for his acts of oppression. No where has the legal maxim "*summum jus summa injuria*" been more sadly exemplified.

1907-08. "Further acquaintance with the north of the district shows me that though the settlement may have settled up old standing disputes, it has, in many cases, only been done by the zamindars having forced the tenants to accept the very rent which the Settlement Department had refused to allow and sometimes much more. Babu Rash Bihari Mandal not only forced all his tenants to accept the former cash rent which was 20 to 33 per cent. in excess of what the survey fixed, but actually secured in addition in many villages a half share in 2 cottahs in every bigha, the produce of the bigha for purposes of levying his rent being fixed at 12 maunds. The Maharaja of Sonbarsa similarly threw all the demands the settlement had cut down into 'miscellaneous,' and forced the tenants to accept them. Babu Rajendra Narayan Singh has been attempting the same game: and enquiries are being made how far he has gone. I mention these names only, but I fear that many landlords not mentioned are in a similar category. The system worked was first to get back practically all rent receipts the tenants had, then to levy rent without giving receipts, then to demand the illegal high rate of rent, and if a man refuse, to sue him for four years' rental and use the decree as a threat to force him to accept. I have secured papers of Babu Rash Bihary Mandal indubitably proving this. The Maharaja's registers now in the Court of Wards also prove this. This wholesale oppression could in my opinion only have existed owing to rent suits being decided by Munsifs—officers who are bound by a technical code of procedure and never have opportunities of going into the mufassal and seeing the evil their orders bring about. I have constantly heard it said that if a man cannot produce a rent receipt, the zamindar must get a decree, and no plea of payment without obtaining a rent-receipt is ever listened to or accepted. I have myself read the appellate judgment of a Subordinate Judge in such a case in which he has come to the clearest and strongest finding that Babu Rash Bihari Mandal had filed forged zamindari papers to support a claim to the illegal rate of rent he claimed: yet the plea of payment is dismissed with the remark that the defendant can file no receipt to prove it. This may be law, but surely it is not justice, which would clearly seem to point to the fact that a man who can stoop to forging papers to support his claim for an illegal rate of rent would not be above stooping to fraudulently suing a man for rent he had received to force him to accept this illegal rate of rent. The plaintiff's whole *bonâ fides* is tainted by this act of forgery—the defendant is not shown in any way to be a man of doubtful credit, yet a decree is given as if it were a matter of course. I am personally of opinion that one of the greatest reforms that could be introduced into these Bihar districts is to place all rent-suits in the hands of Deputy Collectors. I do not see why this would entail any extra cost, for the number of Munsifs would be decreased, it would bring the parties into direct touch with the Collector, and once it was known that local hearing of these cases was possible and probable, I have no doubt that 30 per cent. of the litigation now going on would be stopped because the masses of false cases now brought would never come to Court.

"My plea is for justice, and for giving the go-by to all this procedure. No one who has not heard at first hand such tales as I have, can imagine the utter and cruel injustice now habitually worked in the name of justice through our Civil Courts, simply because all this tangled web of procedure has put the poorer man, the less educated, at the mercy of any unscrupulous man who chooses to ruin him by litigation. The fact that our Courts are here to administer justice seems to be lost sight of by almost every officer presiding in them, and their eyes are rivetted only on questions of whether some rule of procedure has been transgressed or not.

"In the condition of things that has now arrived it is small wonder if we hear less and less of open fights between the landlord and the tenant; but surely that was preferable to the present system when the zamindar utilises the Courts as a cat's-paw to ruin his tenantry for him, and then if the tenant does turn, he is run in for resisting Government authority, and not the zamindar. Small wonder if the tenants begin now to vaguely voice their belief, as I heard one man say, that the Courts are blind—'*tab na aisa ho sakta*' (for only then could such things be); but unless some steps are taken to see that justice, as against procedure, is dispensed, to re-introduce the personal touch between the Courts and the people, in place of the Courts seeing nothing but what pleaders and mukhtears allow their clients to bring to the Court's notice, I think the vague misgivings and hopelessness will be replaced by an active desire among the tenantry to remedy such a state of things. A large section of the bar is engaged in spreading disloyal sedition on the one side; on the other, it is engaged in fostering and thinking out all the cruelly false and criminally fraudulent litigation that is going on and by the injustice, they conspire to bring about, and actually *bring about*, they